

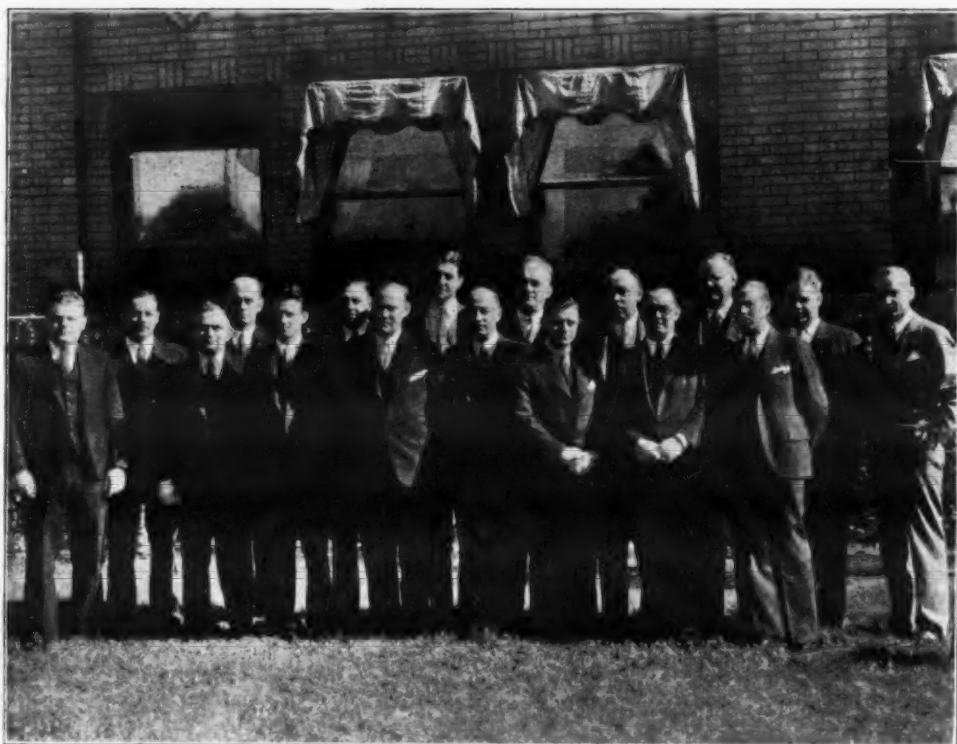
Cooperative Refrigeration Shows Draw Crowds



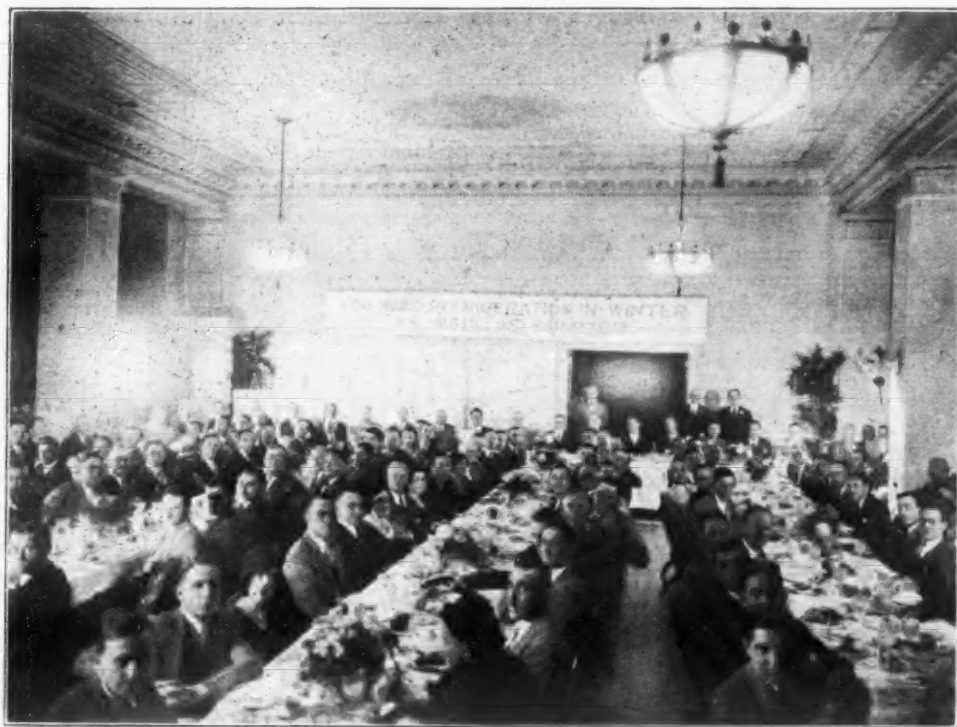
Kelvinator, Norge, General Electric, Frigidaire, and Westinghouse have exhibits in this refrigerator show at Boston, which will continue the rest of this month.



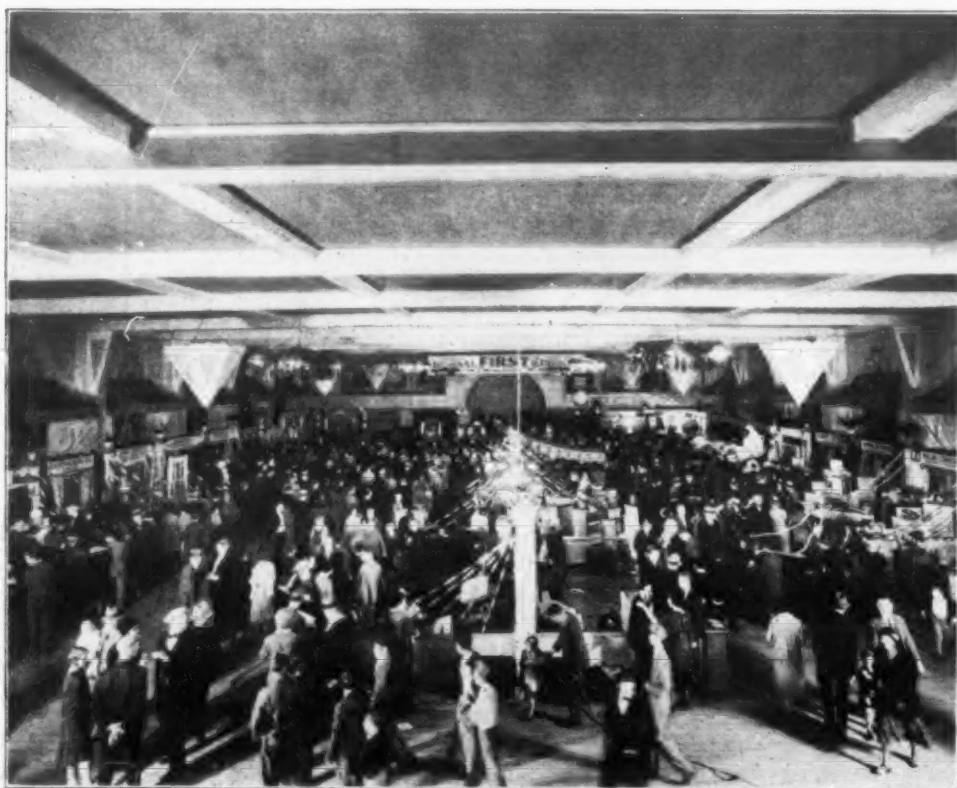
Part of the crowd at the Peoria Radio and Home Appliance Show, listening to the Girls' Band. Notice the clock advertising "Iceberg" Baker, who is apparently unaffected by cold.



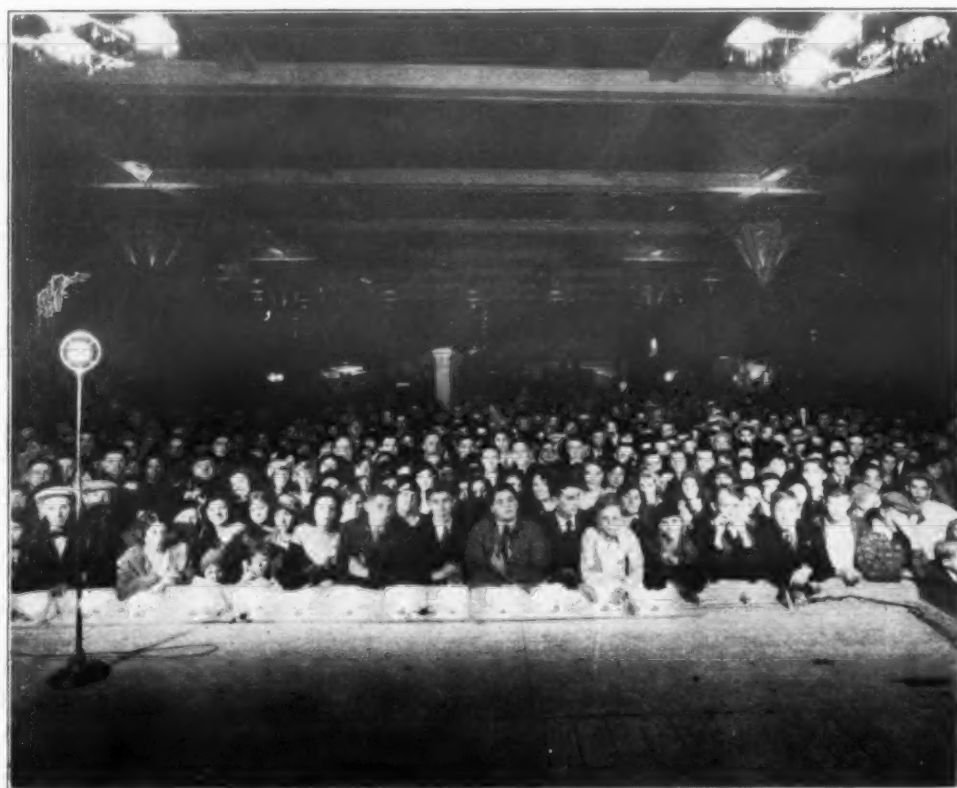
All set for the biggest promotional campaign in the history of Electrolux were these members of the middle west sales division after a six-day regional sales conference at Evansville.



More than 500 electric refrigerator distributors, dealers, and salesmen attended this banquet given by the New Orleans Public Service Co. as a part of its cooperation program.



Some of the exhibits at the Peoria, Ill., show from Oct. 20 to 24. Nine different makes and 43 different models of refrigerators were on view.



As usual, the children in the crowd wriggled up to the very demonstration platform at the Peoria show. An attendance of 14,364, with 13,164 paid admittances, was registered.

ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office.

The business newspaper of the refrigeration industry

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DETROIT, MICHIGAN, DECEMBER 2, 1931

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TEN CENTS PER COPY
TWO DOLLARS PER YEAR

UNIVERSAL CORP. REPORTS ANNUAL YIELD OF 12.49%

Johnston Announces Fiscal Earnings Of \$1 a Share

DETROIT—Earnings of \$1 per share on Class "A" stock, and \$0.17 per share on Class "B" stock were reported by G. M. Johnston, president of the Universal Cooler Corp. in the annual stockholders' meeting, Nov. 25.

Mr. Johnston also announced that a \$0.15 quarterly dividend would be paid on all Class "A" stock on Jan. 15, 1932. The annual statement for the fiscal year ending Sept. 30 showed a profit of 12.49 per cent on all invested capital, he showed.

The net profit in relation to dollar sales increased 2.62 per cent, while the actual profit figure for the year just ended represented an increase of 241 per cent over that of the previous year. The following directors were elected by the shareholders: Ford Ballantyne, John B. Ford, Jr., E. B. Henry, Charles H. Hodges, Jr., John Huetteman, G. M. Johnston, James H. Nelson, A. H. Sarver, and John W. Taylor.

At a subsequent meeting of the directors, the following officers were elected: G. M. Johnston, president; John W. Taylor, vice president; and Ford Ballantyne, vice president.

As reported on page 1 of the Engineering Section of this issue, the Universal Cooler Corp. has just moved into larger manufacturing quarters.

PETRIE NAMES ROGO NEW ENGLAND HEAD

DETROIT—G. E. Rogo, whose connection with electric refrigeration dates back to 1921 when he was assistant treasurer of the Kelvinator Corp. has been appointed by R. I. Petrie, sales manager of the Leonard Refrigerator Co., to be Leonard district manager for the New York and New England territory.

Born near Flint, Mich., Mr. Rogo attended high school and business college at that place.

After his school days, he had eight years in the banking business in various capacities, was in the paint and varnish business six years, and then joined Kelvinator in 1921.

Soon afterward he took over for the factory the distributorship at Peoria, Ill. In 1925, he took over for the factory the distributorship at New York City and changed it to a branch, repeating the procedure at Philadelphia in 1928, and at Cleveland in 1929.

Mr. Rogo left Kelvinator as a regular executive in 1929, but since then has been called upon for various assignments.

When Mr. Rogo took over the Cleveland distributorship in 1929, R. I. Petrie was put in charge by the management. Now Mr. Petrie, having been advanced from Kelvinator regional manager to sales manager of the Leonard Refrigerator Co., appoints Mr. Rogo to be a district manager.

LEONARD DISTRIBUTORS ARE APPOINTED BY PETRIE

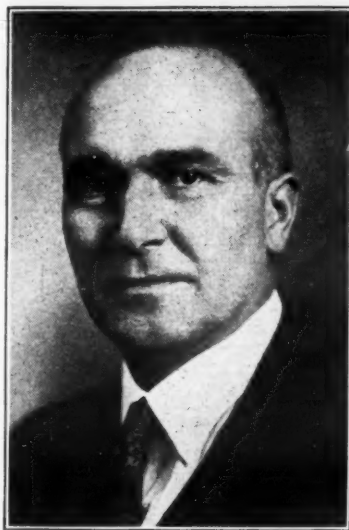
DETROIT—New distributors for the Leonard Refrigerator Co. have been announced by R. I. Petrie, sales manager. These companies are:

Southern Wholesalers, Inc., Washington, D. C.; Ozark Motor Supply, Springfield, Mo.; Vermont Hardware Co., Burlington, Va.; D'Elia Electric Co., Bridgeport, Conn.; Frank M. Brown Co., Portland, Me.; National Automotive Equipment Corp., Syracuse, N. Y.; Capitol Paper Co., Indianapolis, Ind.; J. J. Dougherty, Inc., Milwaukee, Wis.; and Birmingham Electric Battery Co., Birmingham, Ala.

ALLEN W. CHURCH WILL HANDLE GIBSON ACCOUNT

GRAND RAPIDS, Mich.—Allen W. Church has been appointed to handle advertising for the Gibson Electric Refrigeration Corp.

Sales Manager



H. L. BICKEL

BICKEL SALES HEAD FOR TENN. FURNITURE

CHATTANOOGA, Tenn.—H. L. Bickel has been appointed sales manager of the refrigerator division of the Tennessee Furniture Corp., manufacturer of the Cavalier electric refrigerator, according to an announcement made recently by R. T. Frazier, vice president of the company in charge of the refrigerator division.

For the past four years Mr. Bickel has been with Servel, Inc., first as zone sales supervisor, and later, when Servel's electric and gas divisions were separated, as a zone supervisor for Electrolux refrigerator throughout the Middle West and South.

Before going with Servel, Inc., Mr. Bickel was manager of the Memphis branch of the Olds Motor Works. He is a graduate of the University of Wisconsin.

SERVEL EMPLOYEES GIVE \$10,000 FOR UNEMPLOYED

EVANSVILLE, Ind.—The employees of Servel, Inc., manufacturer of electric refrigerators here, have subscribed \$10,000 to the fund now being raised by citizens to care for the unemployed and their families during the coming winter. The goal of the drive is \$100,000.

The contributions of Servel, Inc., were made voluntarily by every employee of the company, according to F. P. Nehrbas, vice president and general manager.

MAJESTIC NAMES NEW ADVERTISING, SALES DIRECTORS

Wanamaker, Collamore Resign; Hadley, Masters Up

CHICAGO, Ill.—Earl Hadley is now acting advertising manager and Floyd Masters acting sales manager of the Grigsby-Grunow Co., following the resignation of Duane Wanamaker and Vernon Collamore, respectively, from those positions, according to officials of the concern which makes Majestic electric refrigerators and radios.

Mr. Hadley was transferred from the sales promotion department; Mr. Masters is a former Middle West district manager.

Ray Erlandson has been named acting assistant sales manager, having been transferred from the sales promotion department.

W. M. Thompson retains his job as assistant advertising director.

Mr. Wanamaker will take a three-weeks' vacation. Aside from that, neither he nor Mr. Collamore have announced their plans.

Announcement

Effective January 1, 1932, the subscription price of Electric Refrigeration News will be increased from \$2.00 to \$3.00 a year.

Since Sept. 9, 1931, there has been a 100 per cent increase in the number of issues per year; yet, on January 1, there will be only a 50 per cent increase in the subscription rate.

Readers whose subscription will expire soon are urged to take advantage of the present money-saving offers.

Subscribers already paid well in advance may extend their subscriptions for another year, or three years, at the old rate.

An order form, showing special group rates, as well as combination rates with Refrigerated Food News, is enclosed with this issue.

Gibson Appointee



HOWARD G. SELDOMRIDGE

GIBSON MIDDLE WEST MANAGER APPOINTED

GREENVILLE, Mich.—The Gibson Electric Refrigerator Corp. announces the engagement of Howard G. Seldomridge as Middle West district manager for Gibson products. Chicago will be his headquarters.

Mr. Seldomridge represented the Victor Talking Machine Co. at Chicago, St. Louis and Indianapolis for eight years.

His territory was later extended to include Lincoln, Nebr., during which time he conducted selling demonstrations for distributor and dealer meetings and before prominent schools and colleges.

In 1929 Mr. Seldomridge organized and managed the Victor Distributing Co. at Peoria, Ill., and in 1930 was appointed associate director of the Majestic sales school of the Grigsby-Grunow Corp.

150 GENERAL ELECTRICS ORDERED FOR APARTMENT

FT. DODGE, Iowa—Reported by the General Electric refrigeration division to be the largest apartment house sale of electric refrigerators made in the Corn Belt, a contract for 150 General Electrics for immediate installation was recently closed by Art Olson, sales supervisor for the Ft. Dodge Gas & Electric Co.

The units were installed in the Warden apartments.

DUNNING ELECTED FIRST PRESIDENT OF REFRIGERANIA

Head, Nellor, McCrea, Harrison Follow In G. E. Race

CLEVELAND—Art Dunning, distributor of General Electric refrigerators in Duluth, Minn., is the first president of Refrigerania.

Dunning came back in the final week of balloting to nose out A. F. Head of the Hoosier Electric Refrigeration Co., to whom he had lost the lead at the end of the eighth week, after having held first place most of the way since the opening of the contest, Sept. 14.

The newly-elected president will receive a Chrysler Imperial convertible roadster and a scroll for achievement from Owen D. Young, chairman of the board, and Gerard Swope, president of the company.

Head, who finished as runner-up in the national contest, will have a place in Refrigerania's cabinet and will receive a special Ford pick-up truck for delivery of refrigerators as a reward for leading all other distributors in District Walthall.

Others who finished on top in the various districts and who will be rewarded with cabinet positions and Ford delivery trucks, are as follows:

(Concluded on Page 4, Column 5)

ENTRY FORMS ISSUED IN FRIGIDAIRE DRIVE

DAYTON, Ohio—A half million entry forms are being sent into the field for the \$6,000 Frigidaire Christmas contest. Dealers and distributors received announcement of the contest last week at a series of meetings throughout the country.

Fifty radio stations from coast to coast are being used to conduct this nation-wide contest. It also is being supported by a national newspaper advertising campaign.

Although the contest is carried on over the radio and through newspapers, contestants must come to Frigidaire showrooms to obtain entry blanks. This ties in the national activity with every Frigidaire sales organization in the country, be it a large distributor or small town dealer.

The contest involves a test of skill in forming a nine-word statement concerning these electric refrigerators. First letters of each of the nine words must be letters from the word "Christmas."

A committee of judges will review the letters, awarding 61 prizes. First award will be \$1,000 in cash, there will be 10 prizes of Frigidaire household models and 50 prizes of \$50 in cash.

Five weekly broadcasts over the NBC-WJZ network are planned for Mondays, Tuesdays, Wednesdays, Thursdays, and

(Concluded on Page 4, Column 3)

OPERATIC STAR ACCEPTS UNIT FOR SERVICE MEN

DETROIT—Madame Ernestine Schumann-Heink recently accepted a Copeland electric refrigerator to be donated as a door prize for an ex-service men's charity ball here.

The occasion followed the closing performance of "The Mikado" at the Cass Theater. Accompanied by a committee from the Edwin Denby Post of the American Legion, Madame Schumann-Heink went to the Detroit-Leland hotel where she accepted the refrigerator on behalf of the post. W. D. McElhinny, vice president of Copeland Products, Inc., himself a Legionnaire, and Ralph H. Graham, president of the Detroit Copeland Refrigeration Co., donated the machine.

WESTERBERG SUCCEEDS CANN WITH SYRACUSE CORP.

SYRACUSE, N. Y.—C. H. Westerberg is now general manager of the General Contract Purchase Syracuse Corp., succeeding J. W. Cann.

Mme. Schumann-Heink Does Her Bit



Mme. Ernestine Schumann-Heink, famous contralto, accepted for the American Legion this Copeland refrigerator, donated by W. D. McElhinny (second from left), and Ralph H. Graham (kneeling).

COMPILE STATISTICS ON ELECTRIC SERVICE

WASHINGTON, D. C.—Preliminary releases showing the number of homes receiving electric service are being sent out through the electrical equipment division, bureau of foreign and domestic commerce, U. S. Department of Commerce, as soon as they can be compiled.

Figures on Indiana, Wisconsin, Kentucky and Utah are now available, and data on the remaining states will be published shortly.

Besides being a basis for judging the prospective market for electrical appliances and radio, these figures are an index of general buying power and an important contribution to the body of market data available to national and local distributors.

The publication of these figures is made possible through the National Electric Light association, which secured the information from its members. The data were completed by reports from power plants not connected with the association.

No figures have been available on the homes receiving electric service by counties since 1925, and the present report is the first instance in which the figures have been given separately for each city of more than 2,500 population. County figures are divided to indicate urban and rural users of electricity.

All these statistics will be published later together with the number of industrial users of electricity in each county and other important market indices for the electrical industry.

G. E. BRANCH OPENED

ATHOL, Mass.—Baldwin-Starker Co. of Greenfield is opening a branch store here for the sale of General Electric refrigerators.

Illinois Is Greatest User of Oil Burners

NEW YORK CITY—Illinois, New York, Pennsylvania, and New Jersey, in the order named, have the largest percentage of domestic oil burners in the country, according to estimates recently released by the American Oil Burner association.

The statistics were based on fuel oil consumption data from the U. S. Bureau of Mines, U. S. Bureau of the Census, American Petroleum Institute, and other sources.

Illinois has 21.05 per cent of the total number of domestic oil burners used in the United States. New York is second with 18.09 per cent. Pennsylvania is a poor third with 6.58 per cent, and New Jersey is fourth with 6.5 per cent.

The association estimates that 774,500 domestic burners will have been sold by the end of the year. It also estimates that a total of 36,500,000 barrels of fuel will have been used by the end of this year, in comparison with 600,000 barrels 10 years ago.

By the end of 1930 a total of 654,500 oil burners were in operation, the association's figures show.

MASSACHUSETTS EDISON CO. PASSES 1931 QUOTA

BROCKTON, Mass.—Taking advantage of local fairs, exhibits, cooking schools, and newspaper advertising, the refrigeration department of the Edison Electric Illuminating Co. reached 128.4 per cent of its 1931 quota on Oct. 22. Harry Smith is in charge of refrigeration sales, carrying the Kelvinator line.

Mr. Smith tied in with National Refrigeration Week Oct. 3 to 10 in his newspaper advertising.

No Conflict Here



George Stevens of Framingham, Mass., deals in both ice and Frigidaires, and claims he finds profit in both.

DEALER IN ICE ALSO SELLS REFRIGERATORS

FRAMINGHAM, Mass.—George T. Stevens, proprietor of the leading ice company in Framingham, Mass., is his own competition.

He is also the Frigidaire dealer in Massachusetts' third largest town.

Out of this seeming paradox has grown an unusual sales philosophy which, his experience of the last five years has shown, is entirely workable, thoroughly practicable.

In Framingham, at least, electric refrigeration and ice refrigeration are not "at outs." And, believes Dealer Stevens, there is no reason why they should be.

Residents of Framingham have become accustomed to Dealer Stevens' dual activities in the line of refrigeration.

They are used to seeing his fleet of ice trucks bearing Frigidaire banners through the streets during the summer months.

His ice customers, who have patronized his concern since 1876, when it was founded by his father, know that he can supply them with advanced refrigeration when they decide to do away with the old method.

His ice men attend to that. In the summer, there are eight of them. In the winter, usually five. Each ice man is, in a way of speaking, a Frigidaire salesman. Some of his older employees, well versed in the use of ice tongs, also are expert Frigidaire service men.

Many of Mr. Stevens' "leads" as to prospects have come from the kitchens of his ice customers.

"When a customer begins considering a switch to electric refrigeration, I usually hear of it through the man who delivers ice to that home," Mr. Stevens explains.

"A salesman then persuades the customer to become a Frigidaire user, permitting us to continue serving him. In many cases, the ice man makes the sale. Thus, I consider every one of my ice customers a potential buyer of Frigidaires.

"Unusual? Maybe. But I've found ice refrigeration and electric refrigeration can be made to go hand in hand, can be complementary to each other. As an ice man, I hold no brief for electric refrigeration. As an electric refrigeration man, I see a great potential field among ice users."

"In 1926, when electric refrigeration began to show up strong, I opposed it, talked strongly against it. However, something occurred that struck me forcibly. A doctor customer of mine had electric refrigeration installed in his home over all my protests.

"I began to think the situation over. Electric refrigeration, I decided, represented progress, and it was no use for a man to stand in the way of progress. I then figured it would be the wise thing to enter the 'refrigeration business,' not confine my efforts solely to the ice business. The result was that I took the Frigidaire dealership in February, 1927.

"I had an excellent field in which to work. The Framingham Ice Co. for half a century—first under my father's proprietorship, then under mine—had been serving the best families in Framingham.

"Many of them were wealthy, old-line families, well able to afford electric refrigeration. Many of them became Frigidaire users when its advantages were explained to them. As ice man, I still continue to serve many potential Frigidaire users.

"The tie-up proved an excellent thing for me. It enabled me to discontinue serving ice customers who were 'poor pay' or who were undesirable for one reason or another.

SEATTLE KELVINATOR CORP. STAGES ANNUAL 'FOLLIES'

SEATTLE, Wash.—The Standard Furniture Co. of Seattle, Kelvinator distributor in this territory, staged its annual "Follies" night recently. Two hundred and twenty-five members of the Standard "family" attended.

In a Parisian style theatre a show entitled "A Night in Gay Paree" was presented, with an interior scene at the Moulin Rouge cafe depicted, where "Parisian" mademoiselles in French costumes were waitresses.

PERIOD STYLE MOTIF FOR WESTINGHOUSE SHOWROOM

DALLAS, Tex.—One of the most novel refrigerator display rooms in the southwest was opened during November at 3209 Knox St. by the A. C. Rogers Co., newly appointed dealer in that city for Westinghouse Supply Co., general distributor for the Westinghouse refrigerator through the southwestern territory.

The A. C. Rogers Co. will show its refrigerators in a room which goes back to the early American period for its decorative motif. A. I. Jones, assistant manager of the southwestern division, said.

A screen at the end of the room composed of natural finish knotty pine, with carved Dutch half-gates at either side stands at one end of the display room. There is also a pottery shelf with jars and dishes in bright shades to appeal to women. Wall paper and orange drapes were imported from Europe for the refrigerator quarters. The display space is 70 by 30 ft.

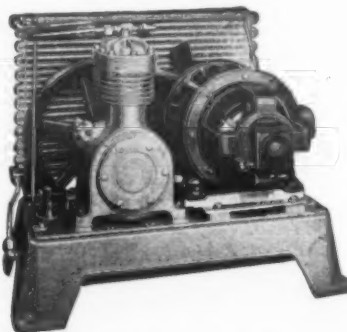
J. E. Watson is the new manager at the Knox St. location.

HOME PRODUCTS DISPLAY EARNS LOCAL GOOD WILL

SEATTLE, Wash.—By displaying "home products" in keeping with a city-wide "buy-at-home" movement, Hopper-Kelly Co., Seattle distributor for Copeland, believes that it gains considerable good will.

The opened Copeland in the windows of the Hopper-Kelly room, with its array of daily products from the state of Washington, which are now the subject of a large sales promotion campaign, was designed to appeal to loyal residents.

KULAIR AIR COOLED WATER COOLED METHYL CHLORIDE OR SULPHUR DIOXIDE CONDENSING UNITS



Simplicity, quality,
efficiency and capacity
unequalled

A size for every use

WRITE FOR INFORMATION

KULAIR CORPORATION
PHILADELPHIA, PA.

Balsam-Wool
Sealed Slabs
✓ EFFICIENT
PERMANENT
*Completely satisfactory
Refrigerator Insulation*

WOOD CONVERSION COMPANY
Industrial Sales Offices:
CHICAGO, 360 N. MICHIGAN AVE.
New York, 3107 Chanin Bldg.
Detroit, 515 Stephenson Bldg.
San Francisco, 149 California St.

Get a Bigger Share of the CHRISTMAS PROFITS with this



Easy-Out ALL-METAL TWIN ICE TRAY Special Christmas Gift Package

It's novelty the Christmas shoppers long for—and this year they demand practical presents, too. That's why Easy-Outs are "naturals" for Christmas gifts.

The special Christmas Gift wrappings can be removed after Christmas and the regular Easy-Out carton displayed.

We will send every dealer who orders a supply of Easy-Outs in Gift Packages a three-piece electric flasher window or counter display that will bring window-shoppers into your store to buy Easy-Outs and give you a buying-minded group of prospects to whom you can sell electric refrigerators. Thus, the Easy-Out does double-duty for refrigeration dealers.

Order your Christmas supply of Easy-Outs today. Be sure to include one or more Easy-Outs with every refrigerator you sell. You can include the cost in the difference between the f.o.b. and delivered prices of the box without increasing sales resistance and thus make a nice extra profit on every sale.



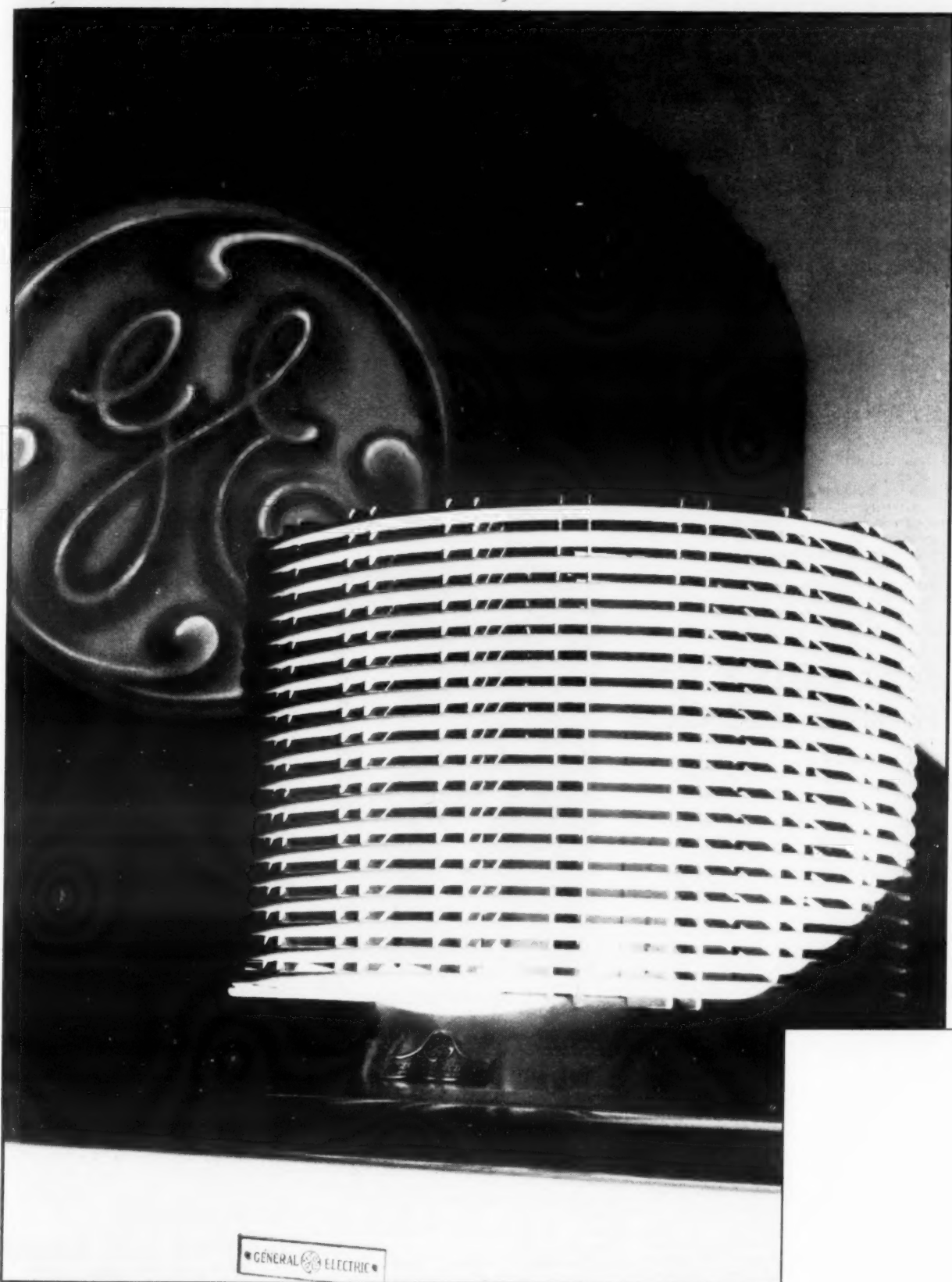
FREE ELECTRIC FLASHER DISPLAY

This automatic salesman and demonstrator will help you sell Easy-Outs when put in your show window or on your front counter. It's FREE to all dealers who order a supply of Easy-Outs wrapped in Christmas Packages. Send for yours today!

REFRIGERATION
ACCESSORIES
DEPARTMENT OF

MCCORD

RADIATOR
& MFG. CO.
DETROIT, MICH.



IN APPRECIATION OF DEALER
AND UTILITY COOPERATION

GE says
"Thank you"
with Cash

ELECTRIC REFRIGERATION DEPARTMENT
GENERAL  ELECTRIC
COMPANY

Hanna Building
CLEVELAND, O.

December 4, 1931

To General Electric Refrigerator Retailers
United States and Hawaii

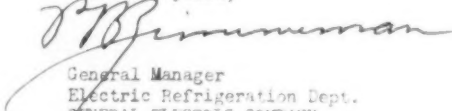
Gentlemen:

We are pleased to announce that our distributors will pay a bonus before the end of this year to all dealers and utilities now merchandising and servicing General Electric Refrigerators.

The payment of this bonus evidences our appreciation of your cooperation in extending our guarantee from two to three years, and making it retroactive to early purchasers.

The quality of your service has added tremendously to the great reservoir of General Electric user good-will. The wide-spread user approval, which came to us unsolicited following the extension of the guarantee, is, of course, gratifying to everyone interested in the sale of General Electric Refrigerators. It again demonstrates the value of intensive research and sound engineering.

Cordially yours,


General Manager
Electric Refrigeration Dept.
GENERAL ELECTRIC COMPANY

PBZimmerman
MA

RETAILERS EVERYWHERE gave concrete evidence of their faith in Monitor Top performance by extending the former G-E 2-Year Guarantee to three years—by making this new 3-Year Guarantee *retroactive to all users*. Now General Electric rewards this splendid cooperation with an unexpected bonus to all retailers.

Performance of the General Electric keeps faith with promise—to dealer and user alike. All the simple mechanism is hermetically sealed-in-steel in the famous Monitor Top. It requires no attention—not even oiling. The cabinet is *All-Steel*—built like a safe for life-time service. Sliding shelves and other exclusive features add powerful sales appeal. And in basic values; in design, construction and careful manufacturing, the General Electric of today is identical with those earlier models whose record of unparalleled performance established General Electric's reputation for unfailing, service-free operation.

General Electric Company, Electric Refrigeration Department, Section DF 121, Hanna Building, Cleveland, Ohio

GENERAL  ELECTRIC
ALL-STEEL REFRIGERATOR

FREDERICK RAFF CO. TO SELL MAYFLOWER

HARTFORD, Conn.—The Frederick Raff Co., 173 Ann St., relinquished its Kelvinator franchise to take over distribution of Mayflower refrigerators for the entire state of Connecticut and three counties in Massachusetts, according to N. B. Francis of that firm.

The Raff company has been Kelvinator distributor for a large part of Connecticut and the western section of Massachusetts for some time. Distribution in Massachusetts was handled by a subsidiary, the Kelvinator-Raff Corp. The latter corporation is being disbanded.

Massachusetts headquarters will be at 141 State St., Springfield. This division will supervise sales of Mayflower in Worcester, Hampshire, and Hampden counties.

The Kelvinator-Rackcliffe Co. has been formed to distribute the Kelvinator line in the territory formerly handled by Raff. Display headquarters of the Rackcliffe company will be located at 257-259 Asylum St., corner of Ann, this city.

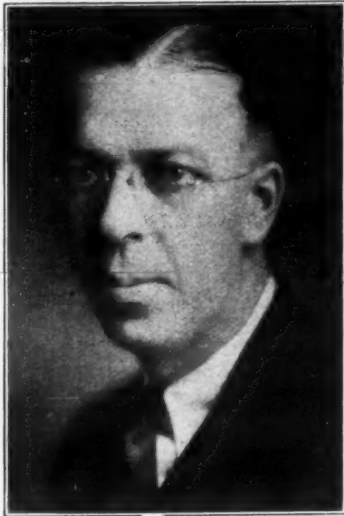
The territory includes practically all of Connecticut except the New Haven and Bridgeport areas, plus four counties in western Massachusetts.

KELVINATOR-KIMBELL NAMES NEW FLORIDA DEALER

JACKSONVILLE, Fla.—Kelvinator-Kimbell, Inc., distributor for Kelvinator in Florida, has announced the appointment of the Edwards Piano Co., 205 West Adams St., as exclusive dealer in Jacksonville for the complete line of domestic and commercial Kelvinator electric refrigerators.

Walter Edwards, president and general manager of the Edwards Piano Co., has appointed Edwin Schurman as sales manager.

Victorious



ART DUNNING
G. E. distributor in Duluth wins
Chrysler roadster.

NORGE DISTRIBUTOR FOR NEW YORK OPENS BRANCH

SPRINGFIELD, Mass.—B. H. Spinney, Inc., Norge distributor, whose territory in New York has been extended to include 15 counties, has opened a branch in North Broadway, Albany.

This firm retains the four counties of western Massachusetts, two counties in southern Vermont and four counties in western Connecticut.

Numerous new dealers are being appointed throughout the district, and sales meetings are being planned for Springfield and Albany.

F. J. FOERSTERLING OF KELVINATOR BURIED

DETROIT—Fred J. Foersterling, southwestern regional manager of the Kelvinator Corp., was drowned in waters adjacent to Shreveport, La., Nov. 24, according to Kelvinator district manager, Herbert Browne.

Foersterling and Browne were members of a party of four who were in a boat which struck an obstacle and capsized, throwing the entire party into the water. All were saved except Foersterling.

Burial was held Nov. 27 at Champaign, Ill., Foersterling's birthplace. The deceased leaves a widow and two children, Jack and Virginia.

Foersterling was 45 years of age, a graduate engineer of the University of Illinois, and his career in the field of electric refrigeration was a long and notable one.

He had been with the Kelvinator Corp. since 1922, at which time he was a distributor at Peoria, Ill. Later he became a district manager, which position he held in various territories.

In July, 1931, when the Kelvinator staff of regional managers was expanded, Mr. Foersterling was transferred from the management of the factory branch at Philadelphia to that staff and stationed at Detroit. At the time of his death, he was absent on one of his regular tours of contact with distributors in the southwest.

ENTRY BLANKS IN \$6,000 FRIGIDAIRE DRIVE ISSUED

(Concluded from Page 1, Column 5)

Fridays until Dec. 16. The contest will close at midnight Christmas eve.

The initial contest radio program, featuring the "Frigidaire orchestra," was heard at 4:45 p. m. eastern standard time Monday. These programs will be presented at the same time every Monday, Tuesday, Wednesday and Thursday, and at 5:15 p. m. eastern standard time on Fridays.

During the first part of this month Frigidaire shipments to dealers and distributors were materially increased above those for the corresponding period of last year, according to Frigidaire executives here.

Two Papers for Less Than the Cost of One

Right now you can combine a subscription to REFRIGERATED FOOD NEWS with your renewal to ELECTRIC REFRIGERATION NEWS for less than ELECTRIC REFRIGERATION NEWS will cost alone after January 1, 1932.

REFRIGERATED FOOD NEWS will keep you posted on the uses of refrigeration the latest applications of refrigeration to the production, transporting and marketing of foods—a field of new and far-reaching developments.

Keep up with the times by reading both papers. The cost is exceptionally low. Any special money-saving offers apply until January 1. An order blank is enclosed with this issue for your convenience.

MRS. LAVARNWAY NAMED G. E. DEALER ECONOMIST

HARTFORD, Conn.—Mrs. Thera L. LaVarnway, household economist, has been engaged as home economics director of the Newton-Parsons Co., Hartford, Conn., dealer in General Electric refrigerators and Hot Point electric ranges. Mrs. LaVarnway will demonstrate the value of these products in the home and give demonstrations of latest electric cooking methods.

Electric ranges are a new line for the Newton-Parsons Co. Electric ranges will be featured with electric refrigerators for which the company is distributor in Hartford county. Branch sales rooms and offices are maintained at Bristol and New Britain.

Mrs. LaVarnway was associated recently with the Hartford Courant Cooking school.

FRIGIDAIRE DEALER HAS TENTH ANNIVERSARY

MIAMI, Fla.—The Domestic Refrigeration Co., oldest electrical refrigeration company in Florida, is celebrating its tenth anniversary. During the 10 years the company has been in business it has sold more than 10,000 Frigidaire.

F. H. McDonald is president and general manager of the company.

DEALER GRANTED CHARTER

DAYTONA BEACH, Fla.—Automatic Refrigeration, Inc., of this city, has been granted a state charter. B. B. Gordon, V. Marshall and D. D. Christman are members of the board of directors.

Finis



J. O. MORRIS
Former G. E. distributor in Albany,
N. Y., who died there recently.



F. J. FOERSTERLING
Former Kelvinator regional manager who was drowned last week.

GENERAL MOTORS RADIO PRODUCES CONSOLE STYLE

DAYTON—A new console style of radio with a seven-tube super-heterodyne chassis and equipped with automatic volume control has just been announced by the General Motors Radio Corp. It is known as the Salem and is priced at \$69.50.

Pre-selector tuning for the first detector is among the features. The new set employs the new super-control 235 tube both as a first detector and as an intermediate amplifier. A 224 tube is used as a second detector, with a 227 for an oscillator and a 247 pentode in the output stage.

A full wave 280 rectifying tube is employed, while for the automatic volume control a 227 is used.

The cabinet is 40 in. high, with beveled-edge top. The sides are flanked with a spooled decoration, while the instrument panel has an illuminated dial calibrated in kilocycles.

A 1/2-in. dynamic speaker is placed at the bottom and screened with tapestry grille.

A 6-tube super-heterodyne receiver, priced at \$39.50, has also been announced by the General Motors Radio Corp. The new receiver, known as the Little Corporal, is now in the hands of distributors and dealers throughout the country.

Both the new variable mu and the pentode tube are used in this new set.

A 224 tube is used as the first detector with a 227 as an oscillator and a 235 or variable mu tube, in the radio frequency circuit.

The second detector is a 224 tube with a 247, or pentode tube, in the audio circuit, greatly increasing the performance through its ability to perform the work of practically three tubes.

A full wave 280 rectifying tube completes the tube complement.

The 6-in. speaker is of the dynamic type. The new "Little Corporal" is housed in a walnut-finished cabinet, outlined with an ebonized pattern. Its height is 15 in., width 11 in., and depth 8 in.

HARDWARE CO. EXECUTIVES STUDY SALES METHODS

DALLAS, Tex.—Executives and department managers of Huey & Philip Hardware Co., here, have returned to school to study electric refrigeration and commercial refrigeration engineering. Classes are held for the teaching of these subjects each Tuesday and Friday night.

R. E. Hunter, regional manager of Mayflower electric refrigerator sales, is in charge of the school.

ART DUNNING WINS G. E. POLITICAL RACE

(Concluded from Page 1, Column 5)
District Allen—C. L. McCrea, Washington, D. C.

District Harvey—Phil Harrison, Newark, N. J.

District Ritter—K. A. Connolly, Billings, Mont.

District Ruck—George Belsey, Los Angeles, Calif.

District Freshman—Mark Wright, San Antonio, Tex.

Among those who finished high up in the national rankings, but who were nosed out in the districts, include: E. J. Nellor of Louisville, Ky., who pulled up in third place in the national rankings; Fred Cushman of Cleveland, who finished in sixth place; and Charles Gould, Portland, Me., who ended up in eighth position.

Compilations are being made on the balloting for the governors, lieutenant-governors, senators, congressmen, and mayors at Refrigeration's headquarters here, and results of the election for these positions will probably be published in the next issue of ELECTRIC REFRIGERATION NEWS.

ESSAY CONTEST WINNERS RECEIVE FIVE FRIGIDAIRE

ATLANTA, Ga.—Frigidaire refrigerators were given as prizes to the five winners of a Coca Cola Co. contest staged over radio station WGST, here, recently.

The prizes were awarded for the five best essays written by housewives on why and how Coca-Cola should be used in their homes. The company considered various makes of electric refrigerators.

The winners were: Miss Nelle Henry, Douglasville, Ga.; Mrs. E. L. Bell, Mrs. Ione H. George, Mrs. C. C. Foster, and Mrs. A. H. Howard, all of Atlanta.

The Coca Cola Co. is now staging another contest in which Frigidaire are again given as prizes.

AUTOMOBILE FLOATS USED BY UTILITY CO.

CHICAGO—Two special automobile floats are seen daily on the streets of the 35 towns near here served by the Public Service Co. of northern Illinois.

One of the floats, representing a musher driving a dog team over the Arctic ice, is topped with a sign reading "A Permanent Cold—You Can't Beat Electric Refrigeration."

The other represents an ice hut with several penguins standing about. The sides of this float carry the names of most of the well-known electric refrigerators, together with those of the local dealers. On a standard surmounting the float is the slogan, "Invest in an Electric Refrigerator."

SHORT NEW SALES MANAGER FOR DENNIS AND GALE

ALLENTOWN, Pa.—Richard H. Short has been appointed sales manager for the Allentown and Bethlehem branches of Dennis and Gale, local distributor for Westinghouse refrigerators. Mr. Short was formerly with the Pennsylvania Power & Light Co., Werley refrigeration department.

APEX CHRISTMAS SCHEME

CLEVELAND, Ohio—A steel-built toy dumping truck, with solid rubber tires, will be offered by many Apex dealers during the Christmas season as a gift with every Apex appliance sold.

NINE years of steady, consistent growth have culminated in the removal of our factory to new and larger quarters at Green, Melville and Solvay Streets, in Detroit. Here the most modern of manufacturing methods and equipment make possible increased efficiency and economy in manufacturing as well as greatly improved service facilities—advantages that will reflect in the favor of consumers and dealers alike.

Universal Cooler Corp.

Detroit, Mich. - - Windsor, Ontario

Balsam-Wool
Sealed Slabs
ODORLESS
SANITARY
Completely satisfactory
Refrigerator Insulation

WOOD CONVERSION COMPANY
Industrial Sales Offices:
CHICAGO, 366 N. MICHIGAN AVE.
New York, 3107 Chanin Bldg.
Detroit, 515 Stephenson Bldg.
San Francisco, 149 California St.

**IT
WAS A
GREAT
YEAR!**

KELVINATOR'S 1931 PROFIT GAINS 10%

Increased Sales, Inventory Control and Reduced Expenses
Account for Rise

From THE WALL STREET JOURNAL Detroit Bureau

DETROIT—Kelvinator Corp., for the fiscal year ended September 30, 1931, reports net profit of \$1,761,709 after all charges, including federal taxes, equivalent to \$1.53 a share on 1,147,302 shares no-par common stock. This compares with net profit of \$1,601,016 or \$1.35 a share on 1,182,136 shares for the year ended September 30, 1930. Earnings do not include that portion of the profit of Kelvinator of Canada, Ltd., applicable to the common stock of that concern held by Kelvinator Corp., and amounting this year to \$62,413.

Kelvinator of Canada, Ltd., reports net profit of \$132,149 after payment of Dominion income tax. After payment by the Canadian company of dividend of \$46,340 on its preferred stock and other surplus adjustments, there remained \$83,218 for common, of which \$62,413 was applicable to Kelvinator holdings.

Without having the earning of profits as its primary objective, Refrigeration Discount Corp., the Kelvinator owned subsidiary, handling consumer paper for Kelvinator and Leonard outlets, reports net profit of \$176,135, which compares with \$161,716 for the preceding year.

Poor Quarter Produces Profit

In 1931, for the first time in Kelvinator history, the fourth quarter of the fiscal year, July, August and September, produced a profit. Full year's results showed a 10% increase in earnings over the previous year and a gain of 44% over the 1929 fiscal year. During the past year \$505,029 was deducted for depreciation.

Cash on hand, September 30, amounted to \$3,051,989, compared with \$1,561,866 a year previous. This betterment of the company's cash position was made despite a reduction of \$1,849,500 in the corporation's funded indebtedness during the year, including retirement as of September 30 of all outstanding 6% notes at the call price of 105, and a reduction in outstanding bonds of Electric Refrigeration Building Corp. of \$246,000. Ratio of current assets to liabilities on September 30 was 8.1 to 1, after adjusting inventory to latest cost or market value, whichever is lower. Working capital totaled \$6,107,468, of which over \$3,000,000 was cash, and \$2,326,698, inventory. There is no bank indebtedness.

George W. Mason, president, says: "An appreciation of the importance of year around refrigeration is making general and rapid headway. This is operating to fill up the seasonal valley in the industry's sales curve. We are extremely pleased over results achieved under prevailing conditions.

"The year has brought added opportunities in connection with new applications for electric refrigeration equipment. Kelvinator this year has expended \$100,241 more for research and engineering development than in the previous year. The entire engineering expenditure has been charged to operating expense.

Many Factors Aid Profit Record

"Many factors have contributed to the profit record. The entire organization has shared loyally in a continuous campaign to reduce operating expenses. We have shown a substantial increase in the number of electric units sold and shipped as compared with the previous year. Careful control has held our inventory to a low figure. On September 30, last, inventory was the lowest for that date since the consolidation of 1926.

"We are looking forward to a continuation of these activities in 1932," said Mr. Mason. "Contracts already placed with us, for the building of cabinets for other lines, will round out our production program at the Grand Rapids plant, and will assure for the plant a volume considerably in excess of the output of the year just closed. Our 1932 Leonard line of electric refrigerators, already announced, has been enthusiastically received by the distributor body, and we are expecting a good increase in business from that source. Our 1932 domestic Kelvinator line is made up of models which we feel sure will be favorably received by the public. The Kelvinator commercial and ice cream cabinets lines have been increased in terms of possible application. Our entire organization is set up to take advantage of whatever opportunities in a general business improvement 1932 may bring."

*Reprinted from the Wall Street Journal,
Wednesday Evening, November 18, 1931*

**AND
NOW
FOR
1932!**

With the finest and most complete line of Domestic Cabinets we have ever had —with the greatest line of Commercial equipment being built to-day—and with the most elaborate Sales and Advertising Plans in our history, 1932 is sure to be another great year.

Now is the time to come with Kelvinator. Wire, write or phone to-day for complete information.

KELVINATOR CORPORATION
14245 Plymouth Road, Detroit, Mich.
Kelvinator of Canada, Ltd., London, Ontario
Kelvinator Ltd., London, England

Kelvinator

Bureaus Continue Autumn Activities

Camden, N. J., Show Gets 500 Prospects; 62 Sold from Floor

CAMDEN, N. J.—With a direct sales volume of 62 domestic refrigerators sold from the floor at the electric refrigeration show conducted by the Electrical League of South Jersey, it is estimated that between 400 and 500 prospects were also secured.

Eight refrigerator manufacturers co-operated in the advertising activities of the show and two others purchased floor space.

Guest speakers at the show were: Miss Marion Sawyer, of the Kelvinator Corp.; M. A. Cox, of Swift & Co.; Miss Ada Bessie Swann, of Public Service Electric & Gas Co.; Alban Doering, chef of the Walt Whitman Hotel; Dr. I. W. Knight, state district health supervisor, and C. O. Emrich, of the Elliott-Lewis Electric Co.

Arizona Dealers Arrange Exhibits

TUCSON, Ariz.—Dealers and distributors of electric refrigerators in Arizona participated in Electric Refrigeration Week by cooperating in various exhibits and shows, according to A. E. Morrison of the Tucson Gas, Electric Light & Power Co.

At Phoenix, the Central Arizona Light & Power Co. held a three-day exhibit in which 11 dealers participated. Many of the dealers also carried radios, so those were included in the show.

According to Jack Arnold, advertis-

ing manager for the Central Arizona Light & Power Co., the show was so successful that they plan to make it a semi-annual affair.

The Arizona Edison Co., operating in Yuma, Gila Bend, Casa Grande, Globe, Miami, Douglas, Bisbee, and Coolidge, held open house and decorated their show rooms during the week and reported a satisfactory number of sales.

The Tucson Gas, Electric Light & Power Co., with two other dealers, the Grabe Electric Co., handling Frigidaire, and the Stevenson Co., Copeland agency, had an exhibit during the whole week.

"The other two dealers reported satisfactory results, and we are glad to report that we had five complete sales at the show, and since then have sold more than a dozen to prospects we obtained during the exhibit," said A. E. Morris of the Gas, Electric Light & Power Co. The Electric Equipment Co., handling Majestic, did not take part in the show, but held exhibits in its own showrooms at the same time. In the general show, a radio hookup provided music both inside and outside the showroom, and 12 entertainers alternated during the afternoon and evening.

Mississippi Bureau Plans Xmas Activity; Prizes Each Night

JACKSON, Miss.—The Refrigeration Bureau of Jackson has planned a 10-day pre-Christmas show to be held Dec. 9-19.

The show will be held in the lobby of the Majestic Theater, with prizes awarded each night. One box is to be featured each night.

New England States Have Many Displays

CAMBRIDGE, Me.—The showrooms of the Eastern Shore Public Service Co. in Salisbury, Crisfield, Princess Anne, Pocomoke, Snow Hill, Ocean City, Federalsburg, Denton, Easton, Millington, Betterton, and Cambridge were given over to refrigerator exhibits during the week of Oct. 3.

Dealers handling Frigidaire, Copeland, Majestic, Kelvinator, Norge and Westinghouse furnished the displays.

Similar exhibits were held in the showrooms of the Delaware division of the eastern shore, in Harrington, Laurel, Georgetown, Rehoboth, and Millsboro, Del., and others were sponsored similarly by the Potomac Edison Co., in the Maryland towns which it serves.

Six Distributors in Norfolk Cooperate

NORFOLK, Va.—Six distributors co-operated in an electric and radio show here, during Electric Refrigeration Week. The local bureau, together with the Electric and Radio Club, directed the show.

An entire floor of a downtown building was given over to refrigeration and afternoon classes on food preservation. More than 7,000 attended.

A 15-minute radio program was conducted every day during the exhibition. The following refrigerators were on display: Frigidaire, General Electric, Kelvinator, Majestic, Norge and Westinghouse.

California Fall Fairs Draw 500,000 Visitors

SACRAMENTO, Calif.—At least 500,000 visitors to the annual fall fairs in California saw electric refrigeration exhibits, according to an estimate made by the California Electric Refrigeration Bureau.

Conducted under the auspices of the Northern California Electric Refrigeration bureau with the cooperation of the Pacific Gas & Electric Co., the refrigeration exposition at the State Fair, here, was housed in a khaki tent, 80 by 80 ft. The tent was fitted with a board floor and a large demonstration platform. Such emergency quarters were necessary following a fire which destroyed one of the main buildings shortly before the time of the fair.

Nine distributors were represented: General Electric, Frigidaire, Kelvinator, Norge, Servel, Copeland, Mayflower, and Majestic. Mrs. Mona Van Dyke, of General Foods Corp., made demonstrations in food preservation three times each day.

A mimeographed set of recipes was given to each visitor and door prizes were presented after the afternoon and evening classes. One exhibitor estimated his probable sales at 100 refrigerators, as a result of the show.

Supplementing the State Fair, co-operative displays under the auspices of local Electric Refrigeration bureaus, were made at 13 of the larger county fairs in California, as well as at numerous smaller city and district fairs in California, Arizona, and Nevada.

Bureau in Phoenix Arranges 1932 Show; To Be Semi-Annual

PHOENIX, Ariz.—Phoenix refrigerator dealers are already making arrangements for another cooperative electric refrigeration show, to be held in February, 1932, following the decision of the Electric Refrigerator and Radio Dealers' Association to make such a show a semi-annual affair.

The decision was based on the outcome of their October show, in which nine dealers in electric refrigerators and radios, the Central Arizona Light & Power Co., and five dealers in food products participated.

A week previous to the opening of the October show, it was advertised by local broadcasting stations and by newspaper publicity. Attendance on the opening day amounted to 1,500, and that figure built up until 4,000 was reached on the final day. A total of 12,000 persons attended the show.

Credit awards of \$75, \$50, and \$25 were drawn for each evening, the credits in each case being applied on the purchase price of an electric refrigerator, the make of which was also decided by lot. A first grand prize of an electric refrigerator and a second prize of a radio were given away on the last night.

Total expense of the show was \$1,400. J. S. Arnold, sales promotion manager of the Central Arizona Light & Power Co., was in charge.

Display in Virginia Draws Big Crowds

PETERSBURG, Va.—More than 1,400 persons visited the Electric Refrigeration Week display Oct. 7, 8, and 9 in Gray's Armory, here. It was the first exhibit of its kind ever held in Petersburg. Eight firms had displays.

Invitations and newspaper advertising were used to get publicity for the show. Music and talks on food preservation were on the program each evening.

Exhibitors were: J. D. Burfoot Co., Frigidaire; R. C. Bristow & Son, Majestic; Harlow-Hardy Co., Inc., Servel; Harlow-Willeox & Co., Leonard; Kent's, Inc., Kelvinator; Radio Shop, General Electric; Stevens & Maclin, Norge; Virginia Electric & Power Co., Westinghouse.

Dealers in Oregon City Sell 235 Units

EUGENE, Ore.—The Eugene Water Board and local dealers provided a co-operative electric refrigeration booth at the county fair, here, in October. The water board, which does no merchandising, is a municipal plant.

At the outset of the Electric Refrigeration Bureau campaign this year, the central station agreed to pay the whole of the \$700 budget of the city if the local dealers would keep five men in the field during the drive.

Two hundred and thirty-five refrigerators were sold from March 26 to Sept. 26 as a result.

Attendance of 4,194 Registers at Vallejo; Population 14,500

VALLEJO, Calif.—An attendance of 4,194 persons was reached at the combination cooking and electric refrigeration show on Oct. 7, 8, and 9. Vallejo's total population is only 14,500.

Santa Claus

HAS BEEN ADMIRING
NORGE Rollator
refrigeration . . . !

There is a good Christmas scheduled for Norge dealers this year . . .

New ideas are in the air and a lot of people are going to make their giving as modern as their thinking . . .

Not tinsel and ribbons but a substantial household gift that will, through its very usefulness, bring pleasure to everyone in the family . . .

Norge Rollator Refrigeration is such a gift . . . one that actually buys itself . . . and pays a nice dealer profit!

Santa Claus has looked over the Norge Christmas campaign. He says: "It's sound. It's handsome. It's logical. It's a real dealer help!"

There is the Nikki Norge window display . . .

And the book "Nikki Norge—the Princess," amusing verse story of a little Norge goddess; in full color and an unusual book-binding job . . .

And the dealer's four-page letter; in two colors and arranged for his own signature and imprint . . .

And two-color full pages in the *Saturday Evening Post* and *Good Housekeeping* . . .

And local newspaper advertisements . . .

Yes Santa Claus has been admiring Rollator Refrigeration and it's going to be Christmas, (a profitable one) at the Norge Dealer's Place.

NORGE CORPORATION
DIVISION OF BORG-WARNER CORPORATION
658 East Woodbridge Street, Detroit, Michigan

NORGE
Rollator refrigeration

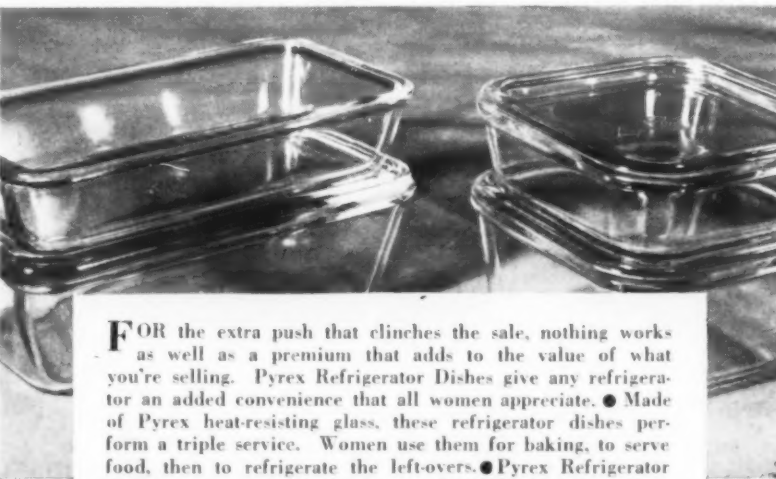
Balsam-Wool
Sealed Slabs



NATIONALLY
ACCEPTED
Completely satisfactory
Refrigerator Insulation

WOOD CONVERSION COMPANY
Industrial Sales Offices:
CHICAGO, 360 N. MICHIGAN AVE.
New York, 3107 Chanin Bldg;
Detroit, 515 Stephenson Bldg;
San Francisco, 149 California St.

Add this "EXTRA" . . . clinch the sale



FOR the extra push that clinches the sale, nothing works as well as a premium that adds to the value of what you're selling. Pyrex Refrigerator Dishes give any refrigerator an added convenience that all women appreciate. Made of Pyrex heat-resisting glass, these refrigerator dishes perform a triple service. Women use them for baking, to serve food, then to refrigerate the left-overs. Pyrex Refrigerator Dishes cost you little, yet have a far-reaching influence on your customer's decision to buy. Single dishes retail for as low as 85c—set of four, \$1.40. Get them from your jobber or write to Corning Glass Works, Corning, N. Y. Prices slightly higher in the West and Canada.

PYREX REFRIGERATOR DISHES Pyrex is the trade-mark which indicates manufacture by Corning Glass Works.





SEALING! A Vital Factor of Insulation

Each of these photographs is magnified 37½ diameters.



This photomicrograph shows a cross-section of a sealing paper reputed to be the best waterproof paper made. It is impregnated with asphalt. Water vapor readily passes through it.



This cross-section shown through the microscope is a standard duplex Kraft sealing paper. Its thin layer of asphalt is sandwiched between two layers of paper. It offers insufficient barrier to water vapor.



This is the special sealing paper made and used for wrapping each slab of Dry-Zero insulation. Its surface is perfectly smooth and provides the most perfect moisture seal known. It will neither crack nor flow at extreme temperatures.

Few insulants make any pretense of being sealed against the damaging effects of moisture absorption. Inevitably disaster must result. The presence of moisture in any insulation not only lowers its efficiency but in most cases brings about sure deterioration.

The "grained" batt of Dry-Zero fibres is in itself highly resistant to moisture. So much so that the U. S. Navy uses the same fibre in their life preservers.

To further assure permanent and efficient service for many years, Dry-Zero encloses each slab in an envelope of asphalt-coated paper that provides the most perfect known seal against water vapor. It is vastly superior to any other available methods of wrapping and sealing electric refrigerator cabinet insulation.

This perfect seal is accomplished by wrapping the Dry-Zero slab completely in a Kraft paper coated with a special asphalt made to Dry-Zero's specifications. This asphalt will not crack

or flow under extreme temperatures. Its use involves special equipment and skilled workmanship.

The photomicrographs at the left tell the story as seen through the microscope. The first two illustrations show the best sealing paper on the market. At the bottom is shown the Dry-Zero wrapping sheet with a thick coating of asphalt that is smooth, glass-like and unvarying in its uniformity.

Absolute safety from the disastrous effects of water vapor is of vital importance in considering refrigerator insulation. Manufacturers looking to the future are using Dry-Zero now.

DRY-ZERO CORPORATION

Merchandise Mart - Chicago, Illinois

Canadian Office - 465 Parliament Street, Toronto

DRY-ZERO

THE MOST EFFICIENT COMMERCIAL INSULANT KNOWN

MERCHANDISING SECTION ELECTRIC REFRIGERATION NEWS

The Business Newspaper of the Refrigeration Industry

Published Every Week by

BUSINESS NEWS PUBLISHING CO.

Also publishers of REFRIGERATED FOOD NEWS (monthly) and the REFRIGERATION DIRECTORY (annual)

550 Maccabees Building, Woodward Ave. and Putnam St. Detroit, Michigan. Telephones: Columbia 4242-4243-4244

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An Urgent Need

WHILE sales managers have been driving their organizations at top speed this fall and winter to extend the selling season far beyond its usual decline, other executives have been laying plans for 1932. And what this latter class has been continually running up against in mapping next year's campaign is the fact that they are handicapped by the lack of adequate industry statistics.

Take the case of the regional representatives whose business it is to get new dealers, for instance. They are being pressed unusually hard just now, for most of the organizations in the electric refrigeration industry seem especially anxious these days to get more and better dealers.

These regional representatives, if they have been on the job long, have found out that the small town dealer, like the established retailer in larger cities, is not so dumb as his station might indicate to the man who walks in as a representative of a billion dollar corporation. He demands to know the facts.

Looking Before Leaping

Dealers of the better sort cannot be won by sheer dint of persuasive salesmanship, sales representatives report. Mr. Retailer wants to make an investigation before he ties himself up with any organization or any product.

He knows other refrigeration dealers in town and in the surrounding territory. He knows that some of them have in the past had difficulty in making money. He knows that others have made something of a clean-up. He has watched some dealers change from one competing line to another during the course of the last few years.

And to assure himself that he is hooking himself up with a sound organization and a good product he wants to familiarize himself with the relative standing of individual companies in the industry, and he desires to become acquainted with results obtained by dealers in other cities and with the present power and future possibilities of the industry as a whole.

They Want the Facts

The intelligent dealer cannot be sold by the mere repetition of generalities and the larding of enthusiasm. Statistics will help show him the genuine opportunity which may exist for him in joining the industry. And the results of his own investigation among his friends and accepted sources of information on the industry will influence his decision as to the organization with which he will affiliate himself.

Distributors are perhaps even greater students of statistics than dealers. It requires a considerable investment for a wholesaler to undertake the distribution of electric refrigerators. He covers a wide area, he must do warehousing and financing.

Distributor's Hazards

At the very start he must put refrigerators on the floors of the various dealers he has lined up, and he will want to know how fast those refrigerators are likely to move. He must spend money for an advertising and promotion campaign, and he must hire specialists in refrigeration sales and

service. He wants facts and figures on the market before he enters it.

Coming on up the line to manufacturers of electric refrigerators, one finds sales executives in need of industry statistics to help establish quotas, to determine advertising appropriations, and to figure out the wise use of those appropriations.

Manufacturers also need statistics to make up production schedules, to adjust production to market conditions. Within the next few years it is possible that the industry may be in danger of overexpansion. The rate of increase can't go up forever; and some day the mark may be overshoot. Facts and figures furnish protection against this possibility.

Suppliers Seek Information

Other groups which might be in a better position to help the industry if adequate statistics were available are those which furnish basic raw materials, those which fabricate these raw materials into parts and supplies, and those which manufacture machinery and production tools.

Before these suppliers establish special departments for research into the development of parts they might sell to the refrigeration industry, before they tool up to make these parts, and before they set up a special sales organization to contact the refrigeration industry, they will want to know a great deal about the potentialities of this market, and about its past performances.

Investors Demand Statistics

Perhaps most important of all the classifications which are seeking statistics on the electric refrigeration industry are the investors and bankers.

The investing public is accustomed to statistics, and expects them. Stable industries generally collect and publish statistics at regular and frequent intervals; and stability is undoubtedly an attraction to the man who is entrusting his money to a corporation.

Investors are betting their savings on the possibilities of an industry. Before they place those bets they want to know the odds and the records. If all they have to go on are guesses, many will not be inclined to put their money on an obviously dark horse.

Danger in Guesses

If the guesses are understated, the less conservative who might have taken a chance may be scared away. If the guesses are exaggerated, undesirable competition may be encouraged to enter the field.

From all sides, from investors and suppliers down to dealers, come demands for statistical information on the industry. Withholding of such information will serve only to retard the progress of the industry. Availability of adequate statistics will help everybody connected with the industry to do a better job.

GLEANINGS FROM RECENT PERIODICALS

Industrial Stabilization

LAST week Gerard Swope and Senator La Follette had a friendly argument about the merits of their respective plans for industrial stabilization. Briefly, Senator La Follette advocated a national economic council, while Mr. Swope urged the use of the trade association as the key agency. Very frankly Mr. Swope pointed out the practical weakness of the economic council plan. Such a group might state principles but it could not apply or enforce them.

Business Action by Business Men

What is needed is a directly responsive and competent business agency in each industry group, because stabilization is not only a matter of theory or principle—it requires direct and competent business action by business men. Mr. Swope said that he had faith in voluntary cooperation of business men in carrying out principles, but if that failed coercion should be used.

The advice of Mr. Swope is sound. It is based on business experience. It implies trial of a logical business mechanism on a voluntary and cooperative basis through already existing agencies. By contrast the plan of Senator La Follette is idealistic but impracticable.

Why Not Try Both?

Buy why not try both? Institute the national economic council, preferably by putting on it executives of trade associations, but at the same time try out the Swope plan through one or more of these trade associations. What is wanted is business stabilization, and this can be had only by trying out good suggestions to see if any or all of them will be effective.—*Electrical Merchandising.*

Letters from Readers

In Which We Sell Five Extra Copies

DePauw University.
Office of the Vice President.
Greencastle, Ind.

Nov. 24, 1931.

Editor:

A clipping from your paper of Oct. 28 was sent to me by one of our alumni of New York City, an officer in a company of ninety million dollars. He wants to know the animus of an article in your column "An Editor on Wheels"—stories of interesting places in the refrigeration industry. He was, doubtless, unable to see how Greencastle had anything to do with the refrigeration industry and how out of all the cities of the United States there were but two mentioned—New York City and Greencastle. He knew, as would almost anyone who knows Greencastle, that nearly every statement in the article was absolutely untrue.

I am writing this letter simply to find out what is the animus of the article. I have called the attention of both the Rotary and the Kiwanis clubs to it and I am also sending it to Mr. Roy O. West, who was formerly Secretary of the Interior, and President of the Board of Trustees of DePauw. He has a very wide business connection with all of the great corporations of the United States and I want him to see if he can find out from some of the officers of the General Electric or Burroughs Adding Machine the cause of the attack. I am only sorry that Mr. Boyer is not living and he could probably find out the cause of the attack. If everything in the article were true, and nothing is, it is such a monumental piece of business stupidity that I am trying to find out what is back of it.

I am sending fifty cents worth of stamps with the request that you send as many copies of the paper as that will pay for.

HENRY B. LONGDEN.

Here Is a Story That Tells Itself

Electric Refrigeration News.
Detroit, Mich.

Nov. 12, 1931.

Gentlemen:

It worries the editors, as they travel around the country, never to see a copy of ELECTRIC REFRIGERATION NEWS or REFRIGERATED FOOD NEWS in the reception rooms of the refrigeration equipment manufacturing companies.

All sorts of technical and trade papers and popular magazines are to be found on the reading tables, but never a copy of the NEWS.

They have made inquiries as to the reason for this apparent discrimination against the one publication which ought to be of greatest interest to employees and visitors.

The answer is invariably to the effect that these papers are too interesting. "We've tried it," they say, "but someone carries the copies away. Put a copy of the NEWS on that table and it won't last 15 minutes."

So we have devised a plan which, we hope, may partially solve the problem. We are sending you today a bound volume of the October issues. It is made up with stiff board covers.

Will you please help us with this experiment. Put this volume on the table in your reception room and let us know a little later how the plan works.

If they carry off this big book, perhaps we can figure out some way to put a ball and chain on the next one.

F. M. COCKRELL,
Publisher.

Without Precedent

Trupar Mfg. Co.
Dayton, Ohio.

Nov. 17, 1931.

Publisher:

This acknowledges your letter of Nov. 12, together with bound copies of the October issues of ELECTRIC REFRIGERATION NEWS.

You may be sure that we will put this on the table in our waiting room and we are equally sure that it will be dog-eared and thumb-marked in a short time.

Let us compliment you on making an experiment of this kind. It is only one more indication of your paper being up to the minute and making moves which may be right but without precedent.

WM. M. MYERS,
Merchandising Division.

Excellent, Expensive

General Refrigeration Sales Co.
Beloit, Wis.

Nov. 16, 1931.

Publisher:

Thank you very much for sending us a bound volume of the October issues of ELECTRIC REFRIGERATION NEWS and REFRIGERATED FOOD NEWS. In accordance with your suggestion, we have placed this bound volume on the table in our reception room, and we shall watch it closely during the ensuing month and

if it disappears within that time, we shall notify you accordingly.

As far as we're concerned, the furnishing of these bound volumes is an excellent idea, though it probably will prove to be an expensive project for you, should you decide to continue the practice.

W. C. MOORE,
Advertising Mgr.

Look Out for Ad Men

Kerotest Mfg. Co.
2525 Liberty Ave.
Pittsburgh, Pa.

Nov. 16, 1931.

Publisher:

Thank you kindly for your letter of the 12th inst., with which you attached the October, 1931, issues of the ELECTRIC REFRIGERATION NEWS in bound form. Some advertising man may run off with this thinking that the stiff board covers would be good to carry his layouts, copy, etc., without folding.

We shall be glad to cooperate with you in trying to retain our copies and still make them available to our visitors.

J. S. FORBES,
Treasurer.

Splendid Way

McCray Refrigerator Sales Corp.
Kendallville, Ind.

Nov. 17, 1931.

Publisher:

This will acknowledge receipt of the bound book of the issues of ELECTRIC REFRIGERATION NEWS and REFRIGERATED FOOD NEWS for the month of October. We will place this book on the reading table in the lobby of our office. If it disappears we will let you know.

We believe this is a splendid way of keeping your publication before the traveling public and we are wondering whether it is your idea to have every month bound, the same as you did with October.

R. J. REHWINKEL,
Advertising Mgr.

Good Idea

Universal Cooler Corp.
Detroit, Mich.

Nov. 20, 1931.

Publisher:

We are very pleased to acknowledge the bound volume of the October issues, which has accompanied your letter of Nov. 12.

This volume is being placed in our reception room and we shall endeavor to keep it there for the benefit of our interested visitors. We believe that this is an exceptionally good idea.

J. W. TAYLOR,
Vice Pres.

President Interested

Consolidated Equipment Corp.
Greenville, Mich.

Nov. 16, 1931.

Publisher:

We acknowledge receiving bound volume of the October issue of the ELECTRIC REFRIGERATION NEWS and REFRIGERATED FOOD NEWS.

While the writer has personally been interested in your publication and has experienced exactly the difficulty of keeping copies in a bound file. We would like to have you advise us the cost of receiving monthly complete bound volume. Thanking you for this information, we are

H. A. HAWN,
President.

Taking a Dare

Electrical Testing Laboratories.
80th St. and East End Ave.
New York, N. Y.

Nov. 17, 1931.

Publisher:

I was very much impressed with the October issues of the ELECTRIC REFRIGERATION NEWS. This seems to me a very fine way to get your story across and I am taking your dare in putting it on the conference room table for reference.

NORMAN D. MACDONALD,
Assistant to President.

On His Toes

Westinghouse Electric & Mfg. Co.
Mansfield, Ohio.

Nov. 17, 1931.

Publisher:

As usual you are very much on your toes, and you may be sure the bound October issues of ELECTRIC REFRIGERATION NEWS and REFRIGERATED FOOD NEWS will find a place in our reception room. Certainly this large book will give us an opportunity to check our own police force.

GEO. W. MOISTER,
Manager.

Ansul Chemical Co.
Marinette, Wis.

Nov. 19, 1931.

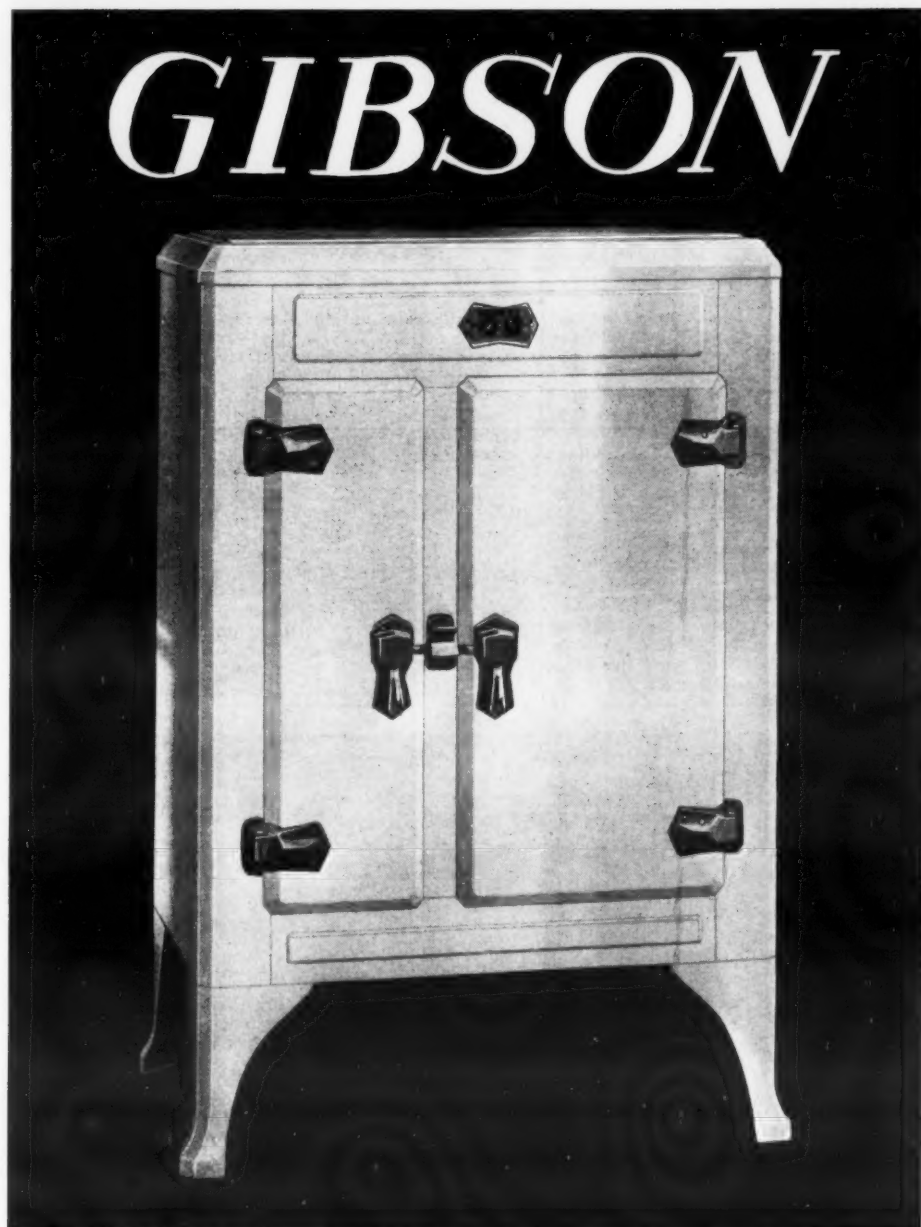
Publisher:

Just a line to thank you for the bound copy of October issues.

We will be very glad indeed to have this available for our visitors.

H. V. HIGLEY,
Secretary.

The Most BEAUTIFUL



Refrigerator

in the WORLD

PROVE IT YOURSELF---COMPARE!

MEANING MORE PROFITS FOR YOU

Have you seen the 1932 Gibson **MONOUNIT** Electric Refrigerator?

If not then there's a real treat in store for you. Gibson packs a 100% sales wallop. It has the beauty appeal which fascinates women—urges them to buy. It has the superb mechanical perfection which instantly wins the admiration of every man.

Figures prove that women do approximately 70% of the buying for the home. Mindful of this, Gibson set out to build "The Most Beautiful Refrigerator in the World," and *here it is*. Experts say so—Comparison proves it. Gibson designed it for women and built it for men. It does the job of pleasing both in a big way. The convenience, dependability and mechanical perfection of a Gibson is equally impressive . . . visible and real.

The **MONOUNIT**—light, compact and sturdy—has *only three moving parts*.

3-YEAR GUARANTEE

It is installed complete in the top of the cabinet, out of sight, in a space less than nine inches high. No noisy belts or complicated mechanism, just a quiet, direct piston drive.

The Gibson cabinet is not built *around* the **MONOUNIT**. The **MONOUNIT** is built *into* the cabinet!

Fifty years of practical experience in refrigerator manufacturing is back of the Gibson Electric. Fifty years crammed with outstanding success. "Gibson" is a name already familiar to millions of homes; a name that signifies safe, dependable food—preservation. And besides this traditional assurance of quality each Gibson Electric carries a three-year guarantee.

It's just the refrigerator the "above the average dealer" has been waiting for . . . and it costs no more.

GIBSON ELECTRIC REFRIGERATOR CORPORATION
GREENVILLE MICHIGAN

50
YEARS REFRIGERATION EXPERIENCE
OVER 3 MILLION SATISFIED USERS

IMPORTANT!

During 1932 Gibson Electrics will be nationally advertised, of course. And, in addition, a special publicity campaign has been scheduled which we believe to be the *most unique and resultful ever devised*. Prepare for the sales response this is bound to bring. Stock the Gibson line! Get the complete details. Write, or wire collect.



BOSTON EDISON CONTINUES FALL REFRIGERATION SHOW

BOSTON, Mass.—The Refrigeration Show, being conducted at 182 Tremont St., has been taken over for the balance of November by the Edison Electric Illuminating Co., and will be open to the public during that time.

Thus far the show has been a great success with Kelvinator, Norge, General Electric, Frigidaire, and Westinghouse being represented.

A total of 25,000 people registered as visitors to the show and to participate in the prize drawing which took place during the past week. Richard Lincoln, head of the Refrigeration Bureau of Greater Boston, conducted the drawing and the winner was Grace Brady, Chelsea, Mass., a school girl. The award was a check for \$100 to apply against the purchase of any electric refrigerator on exhibit.

APPOINTS NEW DEALER

NEW BRITAIN, Conn.—Barry & Bamforth has been appointed as a dealer for Westinghouse refrigerators by the Connecticut Electric Refrigerating Co., New Haven, state distributor.

NAMED G. E. DEALER

WESTFIELD, Mass.—Carroll Music Co. will handle General Electric refrigerators in this city. Eddie Carroll and Joe Geehern are partners in the firm.

Special Savings on Group Subscription Orders

When entering or renewing your own subscription to *ELECTRIC REFRIGERATION NEWS*, you can make a special saving for yourself and associates by making up a group order of five, 10, 20, or more subscriptions to be entered at one time.

ELECTRIC REFRIGERATION NEWS is written to be read on arrival and now that the paper is issued every week, it is doubly important that each member of your organization should have his own copy to read.

On the enclosed order blank, note particularly the terms that apply to group orders. Discuss the possibilities with your associates today. Take advantage of these money-saving offers before rates go up January 1.

IDEAS AND IMPRESSIONS

COMMENT • VIEWS AND EXPERIENCES

By F. M. COCKRELL

Shetland Ponies

When you were a small boy did you have an unsatisfied longing to own a Shetland pony?

Or were you one of the fortunate few—sons of "rich men"—who had that desire satisfied?

Leroy Pelletier (if you do not know who he is, I will tell you more about him later) was one of the many boys who wanted a Shetland pony but could not have one.

His interest did not fade, however, with the passing of his boyhood days. When he acquired wealth he bought a pony.

But he was not satisfied with one. Now he has 150 of them—one of the largest herds in the United States.

He will not sell any of his ponies but he gives them away to children.

Boys (and girls) who acquire his favor are allowed to select a pony from the herd and take it home.

He has given away dozens, perhaps hundreds, without diminishing the size of his herd. Mr. Pelletier understands boys (and their parents) just as he does ponies.

The city boy has no place to keep the pony so, eventually, he has to bring it back to Mr. Pelletier's farm 25 miles north of Detroit.

But even then, the kids may visit their ponies, bring them lumps of sugar and enjoy a full measure of pride in the ownership of a Shetland pony.

This little story is presented as evidence that Mr. Pelletier knows something about human nature. If that is not sufficient, there is plenty more.

Ford Passport

A couple of Sundays ago I visited Mr. Pelletier's home, saw the ponies, and listened to stories of his eventful career suggested by photographs, trophies, and keepsakes in all parts of the house.

One of his prize possessions, framed and hanging on the living room wall, is a worn scrap of paper with these words written in longhand.

"Please pass Leroy Pelletier and friends anywhere, anytime.
Henry Ford."

To really appreciate the full significance of those magic words, one must understand the difficulties of penetrating the inner gates of the vast Ford empire.

No fortress in war time is more closely or effectively guarded than the Ford plant and offices.

Mr. Ford gave the passport to Mr. Pelletier just before leaving on his famous "Peace Ship" during the World War.

Ford Advertising

Mr. Pelletier joined Ford in 1905 as a consulting engineer, but soon took over the advertising and publicity. He wrote the first book of instructions on an automobile ever written.

Having directed Ford publicity for many years, throughout the rise and great expansion of the Ford business, as well as the automobile industry as a whole, it is probably fair to say that he knows something about selling automobiles.

More later about some of his ideas on that subject—ideas which may have a bearing on the sale of electric refrigerators.

But Mr. Pelletier was a publicity man, well versed in the art of showmanship, long before he joined the Ford organization.

Klondike Reporter

Back in 1897 he was the first newspaper reporter in the Klondike and reported the gold rush to the *New York Times*.

His cabin partner was E. Tappan Adney who wrote "The Klondike Stampede," a very accurate account of those stirring days on the Alaska frontier.

Adney represented *Harper's Weekly*, then a leading journal.

Mr. Pelletier makes the interesting comment that only 10,000 copies of Adney's book were sold, in spite of the fact that it is the most authentic history of the Klondike period. The book was probably too accurate, with too many details, to meet popular demands.

Later Jack London, who was never in the Klondike, wrote "The Call of the Wild," which became tremendously popular and made him famous as a writer.

One of Mr. Pelletier's stories of his Klondike experiences concerns two of the gold rushers who were building a cabin while the thermometer registered

40° below zero. A native strolled by and stopped to inquire into the activity.

"Well boys," he said, "what do you think you're doin'?"

"Buildin' a cabin, what does it look like?"

"Well," said the native, "it'll come in handy when it gets cold."

Cold Testers

Turning through Adney's book, Mr. Pelletier called my attention to the record of the Klondike method for determining low temperatures. It said:

"Mercury freezes at 40 to 42 (degrees below zero).

"Kerosene freezes at 35 to 55, according to grade.

"Pain Killer freezes at 72.

"St. Jacobs Oil freezes at 75.

"Hudson Bay rum freezes at 80."

When it got down to "Pain Killer" it was considered fairly cold.

President McKinley

In 1901 Mr. Pelletier was in charge of publicity for the Panama Exposition at Buffalo.

Old timers will remember that President McKinley was assassinated while visiting the exposition.

He was shot by Leon Czolgosz on Sept. 6, 1901, and died Sept. 14.

Mr. Pelletier was showing the presidential party, including the president's wife, through one of the features of the exposition, "The Trip to the Moon," while the president was delivering an address.

The ambulance came by bearing the president. Mr. Pelletier went along, took a hand at the stretcher when McKinley was carried into the hospital, and was present during the operation.

There is more to that story but Mr. Pelletier does not care to be quoted.

Luna Park

In 1904 Mr. Pelletier built Luna Park at Coney Island, New York. He worked for Thompson & Dundy, famous designers of showplaces. They built the Hippodrome in New York and also the Pan-American Exposition.

These few details concerning the activities of Mr. Pelletier will serve to indicate that he is a man of some standing in the field of publicity and showmanship.

I have given these details as a background for one very significant comment which Mr. Pelletier makes regarding the automobile business. He says:

"The automobile was advertised. People came in to see it. That gave rise to the idea that the automobile did not have to be sold. It was really very hard to sell."

Mr. Pelletier's opinions on how to sell automobiles differ radically from those of Norval Hawkins, widely known as an exponent of automobile salesmanship.

Order Takers

Mr. Hawkins insists that salesmen should sell automobiles. Mr. Pelletier is convinced that the best they can do is to take orders.

In support of his theory, Mr. Pelletier asserts that the average buyer of an automobile is mentally bigger than the average salesman.

The situation is just the same, he says, as it is in a ten-cent store.

The automobile salesman has to look out that the customer does not sell him the old car at the curb instead of being sold a new car by the salesman.

The selling must be done by advertising, the salesman merely takes the orders.

That is why, he explains, automobile salesmen appear so indifferent to prospective customers.

Indifferent Salesmen

Sales-minded executives who walk into a showroom are often amazed and frequently express themselves forcibly regarding the utter lack of sales ability displayed by the attendants.

Mr. Pelletier says: "How can a salesman sell a man a \$3,000 car when he is wishing that he had \$300 to make a payment on his home?"

If that salesman were good enough to sell a car and close the order he would be a dealer or distributor running his own business.

"Consider the magnitude of the job," he explains. "It would be necessary for salesmen to sell 8,000 cars a day to keep

the Ford factory going at full capacity.

"That does not mean that salesmen must talk to 8,000 prospects, but that they must close 8,000 orders.

"There simply are not that many salesmen in the country," asserts Mr. Pelletier.

Walter E. Flanders

Mr. Pelletier tells about the time that Walter E. Flanders decided to run a two-page-spread in all of the big daily newspapers to advertise the E. M. F. car. It was the first time that such a thing had ever been done.

Flanders was the dynamic personality who drove the idea of mass production to a successful conclusion.

He had found out how to make cars with interchangeable parts so that thousands could be produced just alike.

But then he was up against the job of creating a demand for that specific car—a demand that would be interchangeable just like the parts of the car.

Flanders had found an automatic machine tool for manufacturing automobiles. What he wanted was an automatic machine tool to merchandise them.

He found the answer in advertising.

Mass Selling

Mr. Pelletier points out that 95 per cent of the operations in the Ford factory can be taught to a worker in five minutes.

That is what makes mass production possible.

He insists that the selling job must be organized the same way.

Advertising is the key to mass selling.

He is satisfied if the salesman will just read the advertisement and repeat it—or at least not contradict it.

But he warns that many business executives have gone wrong by attempting to determine the value of advertising by asking customers what influenced them to buy a car.

He says that questionnaires sent out to test the effectiveness of advertising are always misleading.

The customer will swear that he never read an advertisement. He won't admit that anybody ever sold him anything.

If an advertisement is really clever the customer is not conscious of it.

If the reader brands an advertisement as clever, then it is no good, in the opinion of Mr. Pelletier.

Automobile Dealers

Since talking with Mr. Pelletier I have read the interesting analysis of the automobile industry which appears in the December issue of *Fortune*.

The following extracts are in line with some of Mr. Pelletier's observations:

"Nevertheless, it is true that the average automobile dealer is a poor merchandizer, his floor men poor salesmen.

"There is a paradox in the fact that a car in which there have been invested several million dollars' worth of engineering, together with some of the shrewdest sales brains in the world, should make its debut to the customer via a man on a marble floor whose average earning power—taking the nation as a whole—is \$870 a year.

"Furthermore, unlike salesmen of washing machines or electric refrigerators, it is only the exceptional automobile salesman who will wear out shoe leather looking for customers.

"One reason is that the really hot prospects come to the floor themselves—a unique tribute to the manufacturer as engineer and supersalesman.

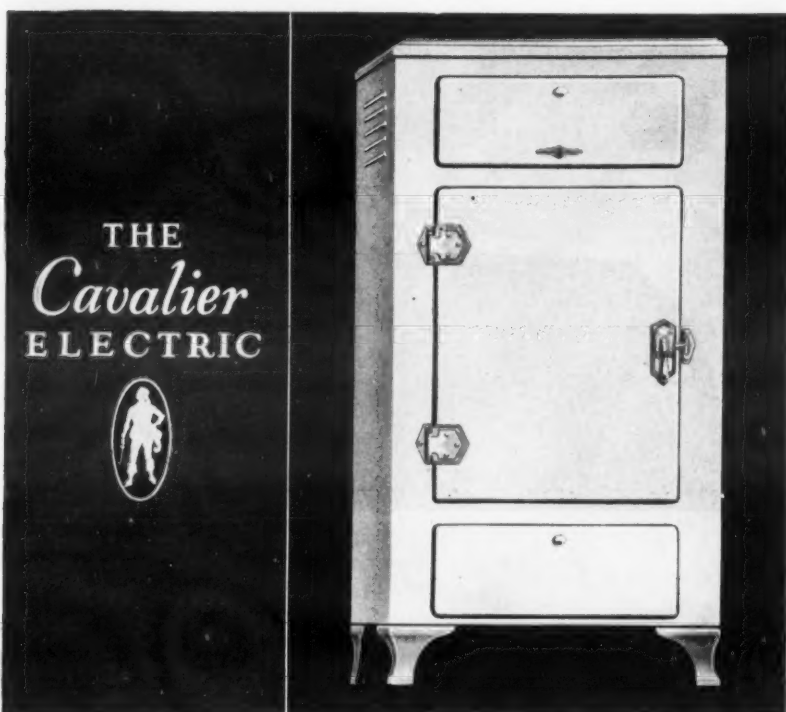
"Another is the inaccessibility of good prospects.

"About 1925, manufacturers generally began to take up their dealers' problems. When the market contracted in 1930, and the overstocked dealers began to fall like ten pins, many manufacturers were not unprepared, many a dealer was saved.

"Today, all dealer activities have become the manufacturer's affair. He not only determines how many cars should be sold every month, and fixes the price and the inventory; he also controls the servicing of the cars, the bookkeeping, the advertising, the location and appearance of the premises, the boundaries of the territory, and the number of dealers to be placed in town.

"Since he has already created the styling of the car, engineered it, chosen its features, and conceived its advertising, it is no exaggeration to say that this manufacturer sells the car.

"His dealer, free and independent capitalist though he may be, has been reduced to taking orders and making repairs."



With *Cavalier* Dealers, "Overhead" Is Reduced to a Minimum

THE CAVALIER Electric Refrigerator is a package installation line. The unit comes from the factory ready to run. Your men set it into the shining cabinet (a truck driver can do it) and your work is finished, save for the minor adjustments and the personal instruction that you naturally want a service man to do.

Before the unit leaves the factory it is adjusted completely and tested thoroughly. There are no connections for you to make and consequently no high priced service men for you to employ. The same simplicity that makes installation so quick and easy also insures the minimum in service expense. You keep the profits on every sale. There's no need to pass them on to some repair man.

There are still openings for distributors in some sections. Write, wire or phone for our plan.

Refrigerator Division
TENNESSEE FURNITURE CORPORATION
Chattanooga, Tennessee

Cavalier
ELECTRIC
REFRIGERATORS

Check these *Cavalier* Features:

Rotary compressor . . . only five moving parts bathed in oil under pressure at all times . . . direct connection motor without belts or gears . . . air-cooled evaporator . . . entire unit mounted on one base—on top . . . cabinets made by us, in one of the largest refrigerator plants in the world

We also invite inquiries from manufacturers of mechanical refrigeration relative to their cabinet requirements. Our engineers will gladly work with your own or will independently prepare designs adapted to your units.



MODEL WL73—Finish: exterior, lacquer; interior, porcelain. Overall dimensions: width, 31 $\frac{7}{8}$ inches; depth, 22 inches; height, 59 $\frac{7}{8}$ inches. Shelf area, 11.40 square feet. Usable interior volume, 7.28 cubic feet. Ice-making capacity, 96 large cubes—11 pounds. Depth, including Air Baffle which prevents recirculation of air, 23 $\frac{7}{8}$ inches.

MODEL WL90—Finish: exterior, lacquer; interior, porcelain. Overall dimensions: width, 33 $\frac{7}{8}$ inches; depth, 22 $\frac{1}{2}$ inches; height, 59 $\frac{7}{8}$ inches. Shelf area, 14.1 square feet. Usable interior volume, 8.98 cubic feet. Ice-making capacity, 96 large cubes—11 pounds. Depth, including Air Baffle which prevents recirculation of air, 24 $\frac{3}{8}$ inches.

Both models have hermetically-sealed, trouble-free Quiet Mechanism; conveniently flat, usable Buffet Top; Arm-high 7-point Temperature Selector; Automatic Built-in Watchman, and other WESTINGHOUSE "Completely Balanced" features.



MORE PROFITS on Christmas Sales

MANY a dealer of electrical appliances is going to make a substantial profit this season from Christmas sales of Westinghouse Refrigerators.

The new standard models, because of their ample size and capacity, are finding an ever-increasing market in all parts of the country in homes which can afford only a moderately priced electric refrigerator. Forceful national advertising in the leading magazines, supplemented with powerful point-of-sale newspaper advertising, is serving to make Westinghouse the accepted Christmas gift.

NEW, POPULAR-PRICED MODELS

Models WL73 and WL90, illustrated, are typical of this splendid line. Examine these photographs closely and check over the exclusive

features listed. These are the features that make the Westinghouse an ideal Christmas seller.

MERCHANDISING AIDS FOR YOU

Behind every Westinghouse dealer is the great Westinghouse sales organization with its proved merchandising counsel to help him sell. To assist him are such features as window trims, mailings, folders, booklets, a complete mat service, coöperative newspaper advertising and many other selling aids.

CASH IN ON THIS OPPORTUNITY!

Dealers who are quick to realize the profit opportunities in Christmas sales should cash in on this opportunity. Time is short. Wire us or write us at once. Westinghouse Electric and Manufacturing Company, Merchandising Department, Mansfield, Ohio.

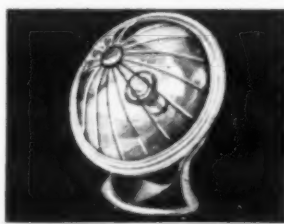


Westinghouse Refrigerator

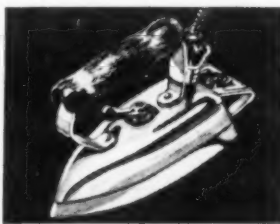
The Name "WESTINGHOUSE" is your guarantee



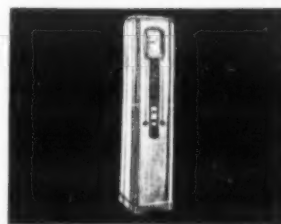
WESTINGHOUSE Flavor-Zone Electric Ranges for every home are profitable items for dealers... A breath of summer in mid-winter! One



reason why the new WESTINGHOUSE Cozy Glow is a popular seller... What woman doesn't want a WESTINGHOUSE Master-Matic Iron?



The country's leading iron... The smart WESTINGHOUSE Columaire, Jr., De Luxe Radio increases profits for aggressive electrical dealers.



Are you going after more business in 1932?

THE 1932 REFRIGERATION DIRECTORY is a logical, practical advertising medium for every manufacturer of refrigeration equipment and for every manufacturer, large or small, who sells supplies or service to this great industry because:

1. The DIRECTORY will be the recognized industry register of all trade-marked refrigeration products.
2. It will be the buyers' guide for engineering, production, and purchasing executives.
3. It will be the handbook for all the suppliers who serve the industry.
4. It will be the encyclopedia of information for present and prospective distributors and dealers.

To Manufacturers of Refrigeration Systems

As a manufacturer of refrigeration systems—household, commercial or industrial—you should use display space in the DIRECTORY because:

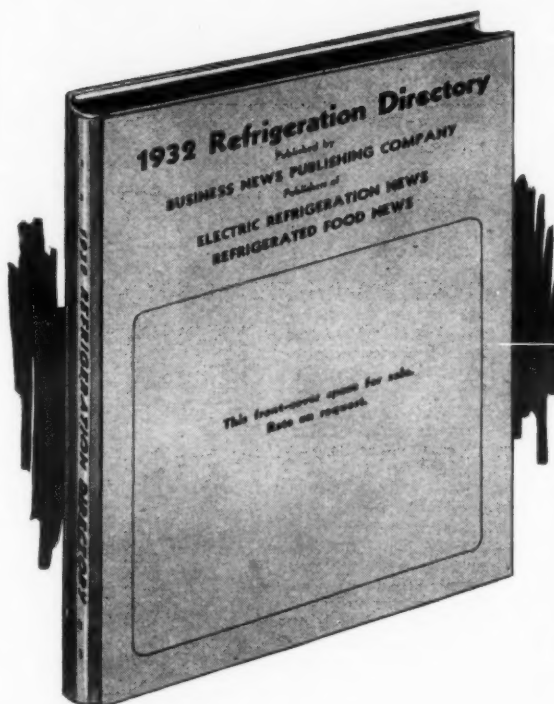
1. It offers you an effective means of securing new dealers; especially successful sales outlets that are actively interested in a distributorship or dealership. No matter where these potential dealers start making their inquiries about the right products to handle, they are almost sure to be referred to the DIRECTORY.
2. The DIRECTORY will be certainly used by good dealers who, for one reason or another, are dissatisfied with their present connections.
3. Your advertisement will be referred to by the great number of dealers who, with incomplete lines, are buyers of additional equipment, special sizes, designs and applications.
4. Your advertisement will be seen both by service departments of dealers and by independent service stations, who are large buyers of parts and supplies for repair and maintenance work.
5. You can also use the DIRECTORY to reach important export markets. (The DIRECTORY's foreign circulation, for instance, will include distribution to every American consular office.)
6. Your DIRECTORY advertisement will reach many unidentified prospects, both dealers and consumers throughout the year. (The DIRECTORY, for example, will be furnished free to the reference rooms of public libraries in all cities of 50,000 population or more.)
7. In addition, the DIRECTORY offers you an ideal means of supplementing your timely advertisements in ELECTRIC REFRIGERATION NEWS and REFRIGERATED FOOD NEWS with a specific announcement that will be current throughout the year; particularly important is this feature in the case of irregular advertisers.

To Manufacturers of Cabinets

Compressors and Cooling Units

As a manufacturer of cabinets, compressors or cooling units, you will find the use of display space in the DIRECTORY profitable because:

1. The DIRECTORY will reach active and potential buyers of these major parts of the complete refrigeration system—established manufacturers, as well as those who are planning to enter the field.
2. Your message will be seen by large distributing organizations and other concerns interested in private brands.
3. The DIRECTORY will be used by distributors and dealers who buy equipment for special installations.
4. The DIRECTORY will be a guide for dealers with service departments and for independent service stations.
5. Your advertisement will also reach the export market.



To Manufacturers of Parts, Materials and Supplies

If you are a manufacturer of parts, materials or supplies for the refrigeration industry, you will find the DIRECTORY made to order for your business announcement because:

1. In reaching established manufacturers and assemblers of refrigeration equipment, your advertisement will be seen by executives, engineers, production men and sales officials—all of whom are influential in setting up specifications, in placing orders.
2. Your advertisement will also reach distributors and dealers who sell the finished product and whose good will or favorable comments will be of great value to you in selling manufacturers and in keeping them sold.
3. Your message will put you in touch with distributors and dealers who are equipped to make multiple, remote, commercial and special applications of refrigeration.
4. Your DIRECTORY advertisement will also be referred to by dealers and service stations who are large users of parts, materials and supplies in handling repair and maintenance work.

To Other Manufacturers Who Have Something the Industry Can Use to Advantage

If you have something the industry—its great manufacturing plants, its engineering laboratories, its wholesale and retail sales organizations—can use to advantage, you should advertise in the DIRECTORY because:

1. The 1932 REFRIGERATION DIRECTORY will be the handbook of an industry that is known for its advanced merchandising, its progressive production and sales methods, its eagerness to keep out in front.
2. The DIRECTORY will represent an industry that is still young, still open-minded, still in the early stages of forming buying habits, still eagerly seeking new methods, new materials, new sources of supply.

1932 Directory Forms To Close January 12.

Final forms close January 12. Plan now to put your message before the influential executives and buyers of the industry. Now is the time to reserve the space you will want in this handy reference book. Without obligating yourself in any way, write today for rates and further details.

BUSINESS NEWS PUBLISHING CO.
550 Maccabees Bldg. Detroit, Mich.

Clogger Dances on Frigidaire Top

ROCHESTER—At a recent "Better Homes Exposition," Gilbert Utilities Corp. staged an act to attract interest in its Frigidaire display booth.

A slightly raised platform of the correct size to support the porcelain top of a W-12 Frigidaire was constructed in the booth and a tap dancer was obtained to do an act upon this improvised platform.

The crowds began to move toward the Frigidaire booth just as soon as the wooden shoes of the tap dancer began their rhythmic clicking upon the porcelain finished metal. As soon as the dance was over, salesmen passed out literature and small souvenirs. School children were invited to come into the booth to draw pictures on various household models displayed.

During the week hundreds of dancing exhibitions were given, 3,500 souvenirs passed out, 94 prospects obtained and seven direct sales made.

PROMOTIONS ANNOUNCED BY STERLING RADIO CO.

KANSAS CITY, Mo.—One new appointment and two promotions have been made recently by the Sterling Radio Co., distributor of Majestic refrigerators and radios, and ABC washers for this territory.

E. C. Truesdell, who has been traveling the north part of Missouri, has been promoted to the refrigeration sales division in charge of sales promotion, devoting most of his time to cooperative work among dealers.

E. R. Hanslip, connected for several years with the company, has been promoted to the advertising and sales promotion department.

L. N. Brown joined the company Oct. 1 to establish ABC washing machine dealers throughout Kansas and northern Oklahoma.

H. C. Bonfig, vice president and general manager, recently returned from the Grigsby-Grunow plant in Chicago and the Altorf Brothers factory, Peoria.

URUGUAYAN IMPORT BAN WILL CONTINUE TO JUNE

NEW YORK CITY—It is believed that the emergency measure passed by the Uruguayan government last August, which prohibited for one month the importation of certain goods including lighting fixtures, refrigerators, and accessories, will be prolonged every 30 days until June 30, 1932, according to a report from N. E. M. A. headquarters.

Reports also show that beginning Sept. 1 the Argentine government established official customs valuations for many items including electrical apparatus in lieu of the C. I. F. Buenos Aires value. The rate is 25 per cent plus a surtax of 7 per cent.

It is also understood, according to N. E. M. A. report that the Federated Malay States may establish an import tariff which will affect, among other things, electrical household devices.

RAY THOMAS DISTRIBUTOR FOR WESTINGHOUSE

LOS ANGELES—Appointment of Ray Thomas, Inc., distributor of electrical products in southern California for 20 years, as distributor of Westinghouse electric refrigerators in this territory has been announced by Carl D. Taylor, manager of the Westinghouse refrigeration division.

Branch offices under the name "Ray Thomas, Inc., Westinghouse Refrigerator Division," were to be opened immediately in Los Angeles, Pasadena, Long Beach, Hollywood, San Pedro, and the bay district.

15 CONTEST LEADERS SELL 1,689 REFRIGERATORS

MANSFIELD, O.—The 15 leading salesmen in the Westinghouse "Build-A-Refrigerator" contest sold 1,689 units during the sales campaign.

Of these sales, 1,225 were made by five apartment house salesmen and 464 by 11 retail salesmen.

The five leading retail salesmen sold 256 refrigerators or an average of 51.2 refrigerators each.

OLD NEW ORLEANS MANSION HAS 16 FRIGIDAIRE

NEW ORLEANS—An old mansion, occupied by General Butler for a time during the Civil War, has been remodeled into 16 modern apartments, each one equipped with a Frigidaire, by Electric Service, Inc.

The remodeled building retains many of the rich furnishings that were a part of the original home. The cost of remodeling totalled \$20,000.

REFRIGERATION SHOW BROADCAST BY RADIO

CHARLESTON, W. Va.—Sponsored by the Electric League of Charleston with the cooperation of local electrical dealers, an electric show opened Nov. 18 in the Appalachian Electric Power Co. building.

Local jobbers and manufacturers of electrical equipment are participating in the show. No admission is charged.

Booths have been constructed and decorated in a black and white color scheme to be used by merchants taking part in the exhibit.

Arrangements were made to broadcast programs Wednesday and Saturday nights from the floor of the electrical show over radio station WOBU.

Local merchants participating in the show include Schoolfield Harvey Electric Co., Londeree Cavender, Appalachian Electric Power Co., McCoy & Gallaher, Electric Home Appliance Co., McKee Music Co., Woodrum Home Outfitting Co., Capitol Light Co., Radio & Light Equipment Co., the Carey System, T. E. Perry & Sons.

In addition, special exhibits were secured from Westinghouse, General Electric, Thomas Field Co., National Lamp Works, Virginian Electric Co., and Charleston Electric Supply Co.

OHIO POWER CO. MOVES TO CUT CONSUMER RATE

CANTON, Ohio—Announcement that the Ohio Power Co., General Electric distributor, with general offices here, had filed with the public utilities commission at Columbus an additional schedule reducing rates to residential consumers and commercial consumers was made by A. G. Moser, division manager.

The savings to consumers in the Canton area will approximate \$243,000 a year and is expected, dealers here say, to greatly stimulate the sale of electric refrigeration units, as the new rate applies to home owners who are potential refrigerator customers.

The commercial division of the Ohio Power Co., which maintains an unusually large display of units on the main floor of its new five-story building, reports its salesmen are using the rate reduction as a talking point in a renewed selling campaign.

BALTIMORE MAJESTIC FIRM HAS DIRECT SALES POLICY

BALTIMORE, Md.—The Eisenbrandt Radio, Inc., Paca and Pratt Sts., distributor for the Majestic electric refrigerator in Maryland, the District of Columbia, and surrounding territory, has put into effect the policy of selling direct to the apartment, apartment-hotel, and building trade.

Heretofore, this business was solicited through Majestic dealers. The first two days this new policy was in effect, three orders were secured from apartment houses in Washington, D. C.

R. A. McLarnon has been appointed to head this department. He has secured four assistants to work with the building trade in the nation's capital.

R. P. Deubell is general manager of the Eisenbrandt organization.

ELECTRICAL LEAGUES MEET JAN. 25 IN QUAKER CITY

NEW YORK CITY—At a recent meeting of the executive committee of the League Council, presided over by Chairman J. J. Caddigan, an invitation from the Electrical Association of Philadelphia to hold the fifth mid-winter conference of electrical leagues in that city was accepted.

The dates decided upon are Jan. 25 to Jan. 27, 1932, inclusive.

Business meetings will be held in the new headquarters of the association.

PLAN \$150,000 PLANT TO MAKE SOLID CO₂

SAN BERNARDINO, Calif.—Dry Refrigeration, Inc., Ltd., recently organized under the presidency of H. E. Weiss, will build a plant for the manufacture of dry ice from dolomite limestone, the location to be about 19 miles west of San Bernardino. The new plant, to cost more than \$150,000, will be erected adjoining a plant for lime manufacture.

SCRANTON FIRM NEW OUTLET FOR ELECTROCHEF

DETROIT—Automatic Equipment Co., Scranton, Pa., has been appointed distributor of Electrochef ranges for northwestern Pennsylvania, R. B. Marshall, vice president and general manager of Electromaster, Inc., has announced.

NEW SALES MANAGER

BRISTOL, Conn.—C. F. Hagenow, formerly connected with the sales department of the Connecticut Light & Power Co. branch at New Britain, has become sales manager for Browning-Simmons, Inc., Norge refrigerator dealer.

FRIGIDAIRE SALESMAN BETTERS OWN RECORD

NEW YORK CITY—A. Israel, Frigidaire salesman of the Long Island Lighting Co. at Nassau, whose activity last year won him recognition in several national selling magazines, is winding up this year in record-breaking style.

Last year, New York Frigidaire men pointed to Israel's record of 183 units in 153 working days. This year they are hailing Abe (that is how he is known to the sales force) for closing 218 sales in the same number of working days.

Outstanding among Israel's 1931 sales were orders from five schools in the Floral Park School District. Working each separately, he obtained orders for all refrigeration in the five schools in this district, including complete equipment in the Sewanaka High School, a million dollar model high school building. Frigidaire household refrigeration, ice cream cabinets, commercial coils and compressors and water coolers were included in the latter order.

Uses Visible Index

Israel does not pose as a high-powered salesman. Rather, he follows factory suggestions, adding a visible file system for keeping track of his prospects. He knows every family in his territory of 4,500 electric meters.

Canvassing, he says, plays a big part in what success has been his. Every morning he canvasses, every afternoon he takes prospects to the showroom, every evening he goes out after orders. Most of his sales are closed at night, he explains.

In summing up his salesmanship, which he terms nothing more than hard work, he says:

Makes Use of Users

"I call on users often, and frequently give them presents for prospect tips.

"I always work nights. Seventy-five per cent of my sales are closed at night.

"I paid \$100 out of my own pocket for a filing system. Dates are flagged to indicate when the prospect should be called upon, and there is a lot of special information.

"I make it a point to see at least 20 prospects a day, and often exceed this quota by far.

"I make full use of factory direct mail. This is a great help to me and I send in at least 60 names a month for circularization with factory pieces."

This electric refrigeration salesman entered the business late in 1927. Like most beginners, he accomplished little during the first few months, but he cashed in before the year was over and made a total of \$5,000. Each year has shown increased sales and, of course, commissions.

BIRMINGHAM G. E. OUTLETS NOW CONSOLIDATED

BIRMINGHAM—Consolidation of the Peacock Sales Co. with the Maddox Electric Sales Co. was made last week. Both concerns handle General Electric refrigerators and both concerns here had locations adjoining each other at 1817-19 First Ave. North.

Remodeling has been completed and the two stores converted into one. The named Maddox Electric Sales Co. will be retained.

Charles Ward, manager of Peacock, has accepted a position with the local General Electric radio sales organization. F. A. Maddox will be manager of the new company.

LOUISIANA FRIGIDAIRE MEN SEE FOOTBALL GAME

NEW ORLEANS—Frigidaire salesmen from Louisiana who won sales prizes during the third quarter were guests at the Tulane-Georgia Tech football game Oct. 24. After the game, dinner was served at Arnoud's French Restaurant and prizes were awarded.

NEHRBAS HELPS UNEMPLOYED IN EVANSVILLE

EVANSVILLE, Ind.—Fred P. Nehrbas, vice president and general manager of Servel, Inc. here, will take a leading part in the drive to raise the sum of \$100,000 for the needs of the unemployed of the city during the coming winter.

MOTOR CO. ADDS MAYFLOWERS TO AUTOMOBILES

CLEVELAND—Helman Motors, Inc., has been appointed as a Mayflower dealer. This company has been selling automobiles for a number of years.

POOR RICHARD BANQUET

PHILADELPHIA—James Pocock of J. J. Pocock, Inc., Frigidaire distributor, 1920 Chestnut St., has presented a Frigidaire to the banquet committee of the Poor Richard Club, as a major prize for the Poor Richard annual banquet, here.

Announcing ARMSTRONG'S LIFE-TEST ROOM *for refrigerators*

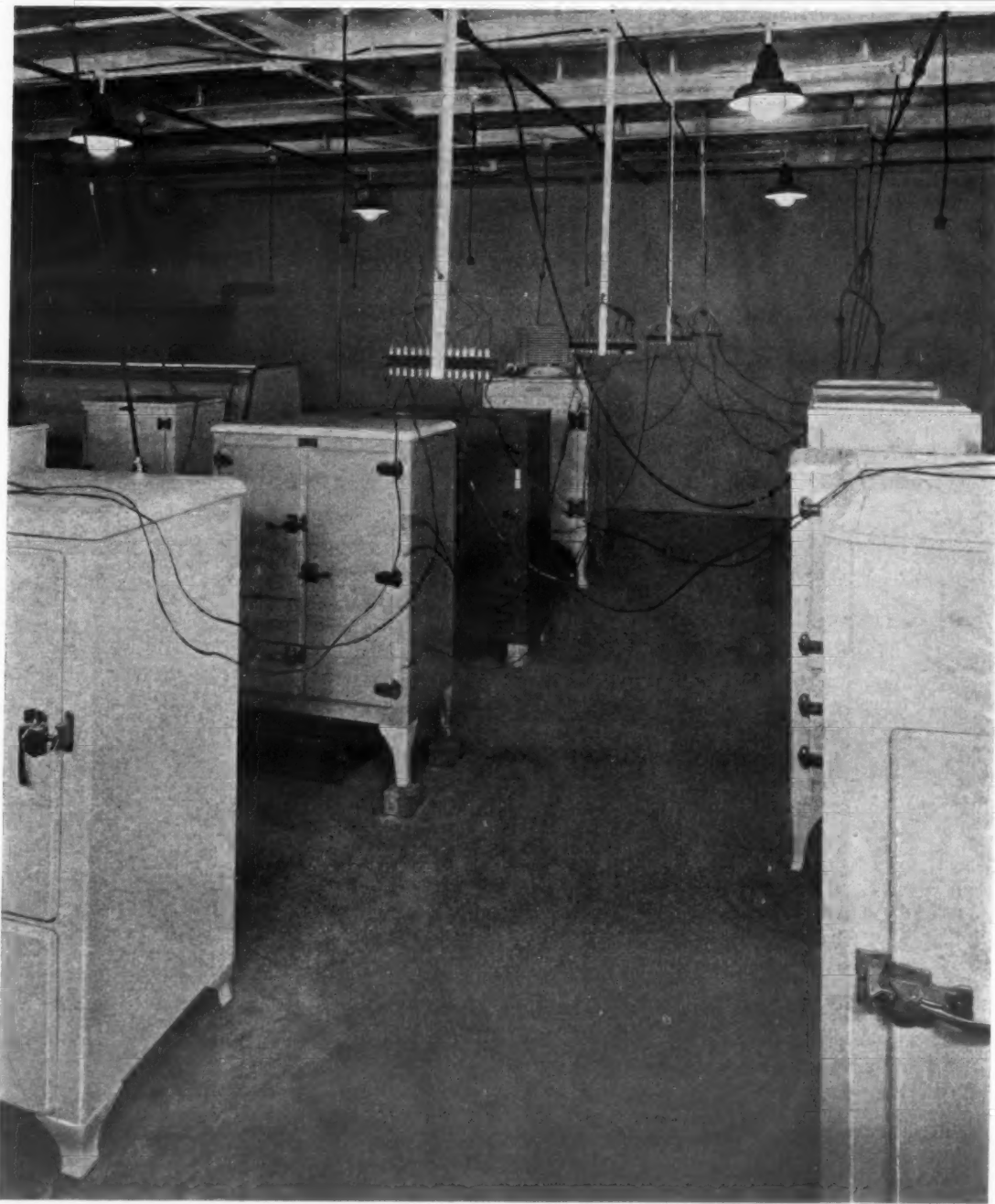
This special research laboratory is at the disposal of users or prospective users of Armstrong's Insulations

ARMSTRONG'S Life Test Room will provide the answer to the question, "How good will my refrigerators be after years of service?" As a user or prospective user of Armstrong's insulations for refrigerated equipment you are invited to use this special research laboratory without cost to you. Armstrong bears the full expense of the tests; you are asked to supply one or more of your models for purposes of the Life Test.

In the Life Test Room, under accelerated conditions, tests will be given which, in a relatively short period, will approximate the usage that your refrigerated equipment would have to endure in a lifetime of normal service.

Equipment will be subjected to temperature and humidity conditions of 100° F. and 90% respectively for definite periods of time and the efficiency will be measured by a comparison at stated intervals with the rating established on the equipment at the beginning of the test.

These tests will be made with the assistance and cooperation of your own engineering department. When the equipment is dissected at the end of a predetermined period you'll have definite information regarding insulation performance and construction methods. If desired, the equipment will be reinsulated and retested, if the joint conference of engineers decides that improvement can be gained by that step. Or, rebuilding of the entire box may be decided upon. This alternate testing and rebuilding, to be carried on in cooperation with the engineers of the companies interested, will be continued until the proper method of insulating each type of refrigerator has been achieved. Data secured in connection with your refrigerated equipment will be kept entirely confidential and will not be released except as your engineers may release it in connection with articles for technical publications.



WHERE THE LIFE TEST IS MADE. This special research laboratory has a capacity of 40 refrigerators of ordinary household size. Armstrong's Life Test, made in cooperation with your own engineers, will determine the efficiency of your equipment during a lifetime of normal service. It will give you valuable data regarding insulation performance and construction methods.

Armstrong's Life Test Room has a capacity of 40 refrigerators of ordinary household size. The room is 55 feet long by 30 feet 6 inches wide, by 9 feet 6 inches high. This allows a floor space of 5 feet by 6 feet for each refrigerator and sufficient room between cabinets for the proper circulation of air.

Refrigerating engineers and refrigerator manufacturers interested in cooperating with the Armstrong research laboratory in conducting Life Tests of their equipment may obtain complete information by writing the Armstrong Cork & Insulation Company, 917 Concord St., Lancaster, Pennsylvania.



Armstrong's Temlok and TYPE LK Corkboard

*Efficient and Practical Insulation for
Refrigerating Equipment*

LITTLE STORIES OF INTERESTING
PEOPLE
IN THE REFRIGERATION INDUSTRY

THE EXPANSION VALVE

By George F. Taubeneck

LITTLE STORIES OF INTERESTING
IDEAS
IN THE REFRIGERATION INDUSTRY

Leonard's Crest

If refrigeration manufacturers continue to put crests on their products, we'll soon know something about the ancient and hallowed art of heraldry. It's a mysterious art, too.

First it was Frigidaire with its coat of arms. The meaning of this armorial bearing was deciphered for readers of "The Expansion Valve" with official off-stage prompting from Dayton.

Now comes Leonard with a crest which decorates the front of every box. Composing the crest are a crown, an opened book with a pen rampant, an hourglass, and a pair of wings limned against the rays of a rising sun.

The crown at the top of the crest is of gold on a blue enamel background. Quill and book are outlined against a red background, while the hourglass stands out in relief against blue.

And here is what they all mean: The book and quill signify knowledge. The hourglass stands for experience. Progress is indicated by the wings 'neath the rising sun.

Inasmuch as Leonard is 51 years old (of course you know that it is now owned and operated by Kelvinator) it undoubtedly is entitled to wear an armorial bearing, to acquire ancestry and a pedigree, to gain a place in the social register of the industry.

Who will be next?

R. I. Petrie

Leonard's new sales manager is an affable fellow who seems as solid and substantial in character as his physical build.

His head appears to be exceptionally large; he carries it well on a pair of bumper shoulders.

A husky chest, a pair of glasses, an I-know-you-old-topper smile—and you have the rest of the picture.

Mr. Petrie's rise in the Kelvinator organization has been steady and almost rapid.

For some time he has been known as a "comer," and now he has a position in which he can spread himself and find outlet for his energy and ideas.

The Gibsons

Apparently things are happening up in Greenville.

Last spring the Gibsons, Charles J. and Frank S., brought out an electric refrigerator and organized the Gibson Electric Refrigerator Corp.

For a great many years the Gibson family had been making ice boxes up in Greenville, and not many years before bringing out their electric refrigerator they had taken over the Belding-Hall refrigerator plant in Belding, Mich., which is just a couple of rifle shots from Greenville.

Through the summer Gibson and Belding-Hall electric refrigerators (the same machine in slightly different boxes) were sold in a slowly increasing number of outlets. The Gibsons were feeling their way.

Now, apparently, they are squared off and all set for business.

In the space of a few weeks they have acquired several new men—chiefly ex-Majestic executives—have established a number of new outlets, and have announced that an "ample" advertising and sales promotion program has been arranged for the coming year.

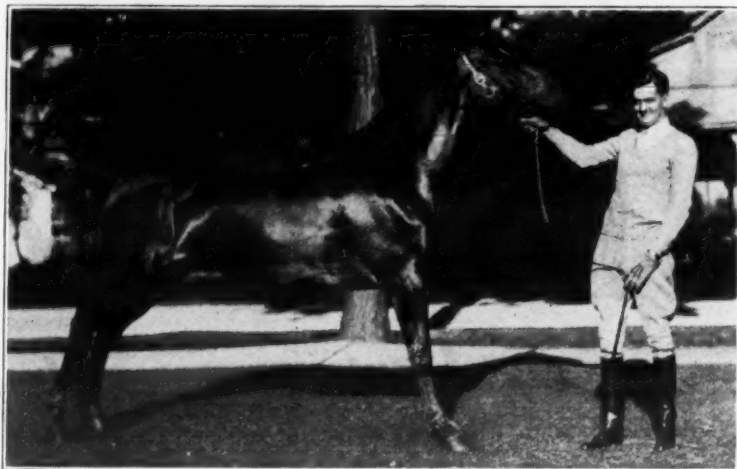
According to Frank S. Gibson,

High Fliers of Refrigerania



Left to right William Kennep, product dept., P. H. Harrison & Co.; W. Arbuckle, asst. product mgr., Rex Cole, Inc.; the pilot, Robert Kane, commercial branch mgr., Rex Cole, Inc.; John S. Osterstock, commercial mgr., P. H. Harrison & Co.; Frank Vernon, commercial branch mgr., Rex Cole.

Two Thoroughbreds



Frank S. Gibson, Jr., enthusiastic young vice president in charge of sales of the Gibson Refrigerator Corp., displays the pick of his stable.

Jr., vice president in charge of sales, the company is planning its program on the basis of a sale of 100,000 electric refrigerators in 1932.

Frank is a young man with a lot of enthusiasm and aggressive ideas.

His picture, together with one of the thoroughbreds from his stable (riding is No. 1 hobby with him; he likes to watch football games, too, and does frequently), appears on this page.

Charles J. Gibson, who became president of the Gibson interests upon the death of his father in 1925, is an impressive individual who appears to be the type of man not easily "sold" on anything without plenty of time for consideration and reconsideration.

Mr. Delano, the new general sales manager, is an authority on sales schools.

He organized the Victor Talking Machine Co. sales school, conducted a similar sales school for the Atwater Kent Mfg. Co., and was later allied with the Brunswick organization.

In 1928 he opened the Majestic sales school for the Grigsby-Grunow Co. Mr. Delano declares that this was the largest commercial sales school ever formed.

John Lewis, veteran general manager, was the subject of a character sketch by Engineering Editor John Schaefer in the Nov. 18 issue of ELECTRIC REFRIGERATION NEWS (Engineering Section).

Eastman's Ancestry

Son of a noted Indian physician and a New England writer and poet, O. E. Eastman, new personality in Copeland's advertising and sales promotion department, has a heritage which reads as follows:

His father, Dr. Charles A. Eastman, Indian physician, author and lecturer, grew to early manhood living the wild, nomadic life of the western plains Indian before the coming of white men.

In 1872, at the age of 15, Dr. Eastman was told by his father that he must go to school. Cutting his long hair, he turned his back on everything he had ever known.

He was graduated from Dartmouth

College in 1887, and received his medical degree at Boston University three years later.

Dr. Eastman has written many books and articles on Indian subjects, and is considered an authority on these matters. His works have been translated into French, Danish, Bohemian, Russian, and other languages.

Lucky Break for Somebody



G. E. "Toppers" from the western zone will visit this alluring spot on Catalina Island on their vacation jaunt in January.

O. E. Eastman's mother, coming from old New England stock, had her first book published in 1878, when only 15 years old.

At 20, she began teaching among the Indians, first at Hampton Institute, then as the first government supervisor of Indian schools.

Her work carried her on horseback through hostile Indian country, but she soon learned the Sioux language and was always treated with consideration by the Indians.

It was in this work that she met Dr. Eastman.

She has been writing more or less actively for over 50 years, and published a book of poems last year.

O. E. has an interesting record of his own.

He served two years in the Navy during the war, then a year in Colorado working in a radium mining camp.

He roved through Canada, working at whatever he was offered, then graduated from college in Idaho.

He has been in selling and advertising ever since.

Protege of Douglass

When Eastman was with Kelvinator a few years ago, he was "discovered"

by Ralph M. Douglass, then advertising manager of that company.

When Mr. Douglass went to Silent Automatic about a year later, he soon persuaded young Eastman to join him.

Two years ago when Mr. Douglass went to Copeland as manager of advertising and sales promotion, Eastman was promoted to the position of advertising manager of Silent Automatic.

But this pair was not to be separated from each other for long.

A few weeks ago, when Silent Automatic was merged with Timken-Detroit, Mr. Douglass seized the opportunity to get his protege back under his wing.

Mr. Douglass claims that Eastman keeps step with him like the second member of a tap dance team.

Pin Money Club

An Apex dealer who prefers to remain anonymous has a Christmas business-getting plan which he has been carrying out with considerable success.

Early in September he started a direct mail and newspaper advertising campaign, announcing to his community the formation of what he calls "The Pin Money Club." His proposal was this:

For the deposit of \$1 each week, "pin money," so to speak, between then and Dec. 25, he would set aside any Apex appliance for Christmas delivery.

Thus far 48 women have enrolled in "The Pin Money Club," and the number grows every week. Most of the

service man right out, for, said she, the refrigerator was so cold that it had already burst several eggs.

Post haste, the service man rushed out, to hit upon the best refrigerator story of the day. The woman had placed her eggs in the grids of the ice cube pans, thinking they were intended for egg storage purposes.

Three-Year Guarantee

We can't vouch for the veracity of this story, nor can we tell you just who told it to us, but in some recent gathering of refrigeration men somebody (definite, isn't it) told an odd one about an Indian rug maker who plies his trade among the tourists who pass through Santa Fe.

This particular First American, who doesn't savvy much English, has a perfect passion for the colored advertisements which reach him in old magazines, so the story goes.

A very nice lady who heard about the rug-maker thought it would be a splendid idea to take back East a hand-woven rug containing a pattern of her own selection.

So she turned over an alluring magazine cover to the rug-maker and said: "Put heem in rug. Savvy?"

But the Indian found the magazine cover a bit difficult when he got to weaving the rug. Leaving through, he chose the next brightest design in the magazine, and faithfully wove a replica of it into the rug.

Imagine the lady's surprise when she called for her rug and saw a model of a well-known refrigerator, embellished further with the carefully woven words "Three-Year Guarantee."

Challenging the Industry

J. R. "Buck" Eldridge, salesman for 555, Inc., Little Rock, Ark., distributor for Kelvinator refrigerators, made a hole-in-one on a mashie shot recently.

It was only his twelfth game of golf. The hole-in-one was witnessed by several other golfers on the course at the time.

To George Bright (unofficial golf champ of the industry), R. W. Ayres (A. S. R. E. title-holder), French Nestor (Norge national champion), J. M. Fernald (who won the last N. E. M. A. refrigeration tournament by being the only contestant to finish the course), and Lou Roswell (Majestic salesman in Philadelphia, who recently made his second hole-in-one), "Buck" Eldridge sends a lousy challenge.

Come one, come all.

Bootleg Frigidaire

Bootleggers around Danbury, Conn., are using electric refrigerators as blinds for liquor, some of our Yankee friends tell us. Recently Connecticut state policemen noticed that a large truck, loaded with crates bearing the name, "Frigidaire," was having a difficult task climbing a grade.

An investigation by the policemen showed that the crates contained, instead of electric refrigerators, choice liquors.

Eleven hundred quarts of liquor were appropriated in the seizure.

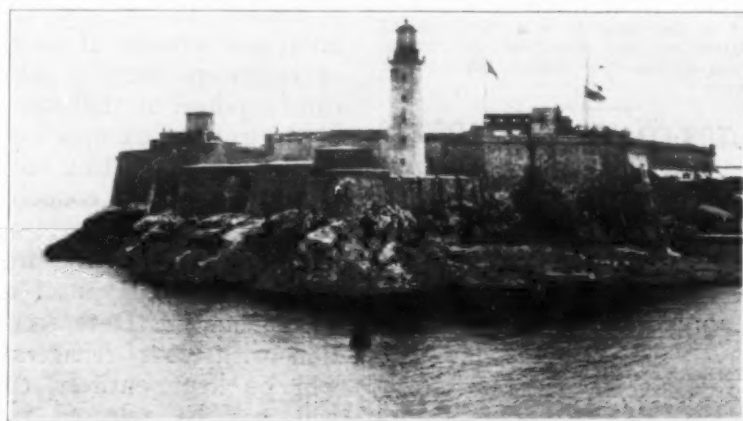
Speakeasy Fish

Perhaps one of Detroit's keenest frozen-food enthusiasts is the proprietor of a certain speak-not-so-terribly-easy.

Every Thursday night his patrons gather for a fish fry, which is one of his specialties. (The other specialty is a bootleg—appropriately—phonograph record, "You Rascal, You.")

The fish is none other than quick-frozen haddock, and a delicious dish he makes of it... so we are told.

A Castle in Cuba



Morro Castle (shown above) in Havana, Cuba, is one of the interesting places southern zone "Toppers" will see.

EMPORIA DEALER OPENS NEW SALES HEADQUARTERS

EMPORIA, Kan.—The Pioneer Music Co., Majestic and Kelvinator dealer, has formally opened its new quarters in the Rorabaugh building. Ample display space has been provided on the floor and balcony for both refrigerators and radios which will be sold in the store.

Cyclists New Stunt

SEATTLE, Wash.—James Canny, Frigidaire installation man in Seattle, is getting publicity in a new fashion. He has organized a bicycle team known as Canny's Frigidaires. The cyclists have been gathering form and speed and are closing their 10,000th lap in a marathon contest.

STERN & CO. IS HOST TO MAJESTIC RETAIL DEALERS

HARTFORD, Conn.—Stern & Co., distributor for Majestic electric refrigerators and radios, was recently host to more than 100 retail dealers in western Massachusetts and Connecticut.

At the meeting an announcement was made that Stern & Co. had taken over the distribution of electric appliances made by Sampson-United Corp., Rochester, N. Y.

R. S. Rowlette, sales manager for Stern & Co., was toastmaster at the dinner, and the following speakers spoke during the course of the evening: A. O. Samuels, president of Sampson-United Corp.; R. H. Knowlton, vice president of the Connecticut Light & Power Co., and L. H. Knapp of the Hartford Electric Light Co.

SEATTLE GAS CO. TO HAVE NEW SHOWROOM

SEATTLE, Wash.—The Seattle Gas Co., merchandiser of Electrolux refrigerators, has acquired a new headquarters, where new salesrooms will be provided for these refrigerators, as well as other appliances.

The gas company has secured the five-story building at 1507 Fourth Ave. It will spend \$100,000 to remodel and improve before moving from its present location.

DEALER MOVES STORE

REDWOOD CITY, Calif.—Alfred Whiting, operating as Whiting's Radio & Refrigeration, has moved his store from 234 Main St. to 2638 Broadway.

REQUESTS FOR INFORMATION

Readers who can be of assistance in furnishing correct answers to inquiries, or who can supply additional information, are invited to address Electric Refrigeration News, mentioning query number.

Refrigeration Training

Query No. 598—Please inform me where I can obtain instruction in electric refrigeration.

Answer—National Technical Institute, 4300 Euclid Ave., Cleveland, and Utilities Engineering Institute, 404 N. Wells St., Chicago.

List of Manufacturers

Query No. 599—Please send us a complete list of manufacturers of both gas and electric refrigerators.

Answer—Our annual directory issue of Jan. 14 presented a complete list of companies. New companies that have entered the field since then include the All-American Mohawk Corp., North Tonawanda, N. Y.; Bohn Refrigerator Co., St. Paul, Minn.; Gibson Electric Refrigerator Corp., Greenville, Mich.; Rice Electric Refrigeration, Inc., Brooklyn, N. Y.; Sanitary Refrigerator Co., Fond du Lac, Wis.; Tennessee Furniture Co., Chattanooga, Tenn.; and the Uniflow Mfg. Co., Erie, Pa.

Ranco Controls

Query No. 600—Who makes the Ranco thermostat control for electric refrigerators?

Answer—Automatic Reclosing Circuit Breaker Co., 1304 Indianola Ave., Columbus, Ohio.

Ratchet Wrenches

Query No. 601—Where can ratchet wrenches for operating valves be obtained?

Answer—Kerotest Mfg. Co., 2525 Liberty Ave., Pittsburgh.

Finned Copper Tubing

Query No. 602—What companies can supply finned copper tubing?

Answer—Bundy Tubing Co., 4815 Bellevue Ave., Detroit; Bush Mfg. Co., 100 Wellington St., Hartford, Conn.; Heath & Heath, Inc., 1705 S. Hope St., Los Angeles; McCord Radiator & Mfg. Co., 2857 E. Grand Blvd., Detroit; Rome-Turner Radiator Co., Rome, N. Y.; and Wolverine Tube Co., 1491 Central Ave., Detroit.

Metering Devices

Query No. 603—Where can we obtain coin operated metering devices for use with electric refrigerators?

Answer—Mills Novelty Co., 4100 Fullerton Ave., Chicago; R. & R. Appliance Co., 315 N. Main St., Findlay, Ohio; J. P. Seeburg Corp., 1510 Dayton St., Chicago; and Studner Brothers, Inc., 245 Fifth Ave., New York City.

ANSWERS TO BACK QUERIES

Answer to Query No. 578—In addition to the companies previously mentioned, the American Hard Rubber Co., 11 Mercer St., New York City, supplies breaker strip mouldings for refrigerator cabinets.

Answer to Query No. 589—The Kason Hardware Co., 61-67 Navy St., Brooklyn, N. Y., is prepared to furnish hardware for refrigerated trucks.

Lansing Cooking School Draws 2,750 Attendance

LANSING, Mich.—A total of 2,750 women attended the recent cooking school sponsored by the Capital News with the cooperation of the local General Electric branch, according to a report made by C. G. Blackburn, manager of the Lansing branch store of Caswell-Stull, Inc., General Electric distributor for the state of Michigan.

The attendance showing, termed "splendid" by the Capital News, was probably accounted for by the fact that it was a "repeat" school, Blackburn stated.

Mrs. Emily M. Lautz was hostess at the "class sessions." At the close of the meetings the audience filed up to the platform to view the equipment and to get a closer look at the foods which they had seen prepared.

SALESMAN MAKES 5 SALES AT GRANBY FAIR

GRANBY, Conn.—Harry C. Starr, salesman for the Newton-Parsons Co., General Electric distributor at Hartford, sold five electric refrigerators to persons never contacted before at the recent two-day Granby Fair, here.

Two General Electric bottle water coolers, a part of Newton-Parsons' exhibit, dispensed more than 2,000 glasses of water during the fair.

SOUTHEASTERN FRIGIDAIRE CONTEST NEARS CLOSE

ATLANTA, Ga.—District representatives for Frigidaire in the southeastern region are entering the last few weeks of their quota contest which began Oct. 1 and ends Dec. 31.

Two 1932 Chevrolet cars will be given as prizes to the high provincial supervisor in the district and in the southeastern region.

APPOINT 2 DISTRIBUTORS FOR ELECTROCHEF

DETROIT—Two new Electrochef distributors have been appointed, according to Gerald Hulett, sales promotion manager of Electromaster, Inc.

Harry Lever, general manager of the Capital Electric Co., 393 Peachtree Ave., Atlanta, Ga., will act as distributor in Georgia, northern Alabama and a portion of Tennessee.

Specialty Wholesalers, Inc., 1127 South Main St., Buffalo, N. Y., will distribute Electrochef in a number of counties surrounding Buffalo. C. J. Pagel is general manager.

MASON CITY, IA., MAJESTIC DEALER MOVES

MASON CITY, Ia.—The Cerro Gordo Maytag Co. has moved to new and larger sales and display rooms at 13 First St. southeast.

The store, under the management of T. D. Larson, handles Majestic electric refrigerators and radios, and Maytag washers. It has just announced the 25-cent a day meter-purchase plan, the first store in the city to do so.

WESTINGHOUSE DISTRIBUTOR OPENS NEW STORE

HOUSTON, Tex.—The Peden Co., Westinghouse distributor here, has opened a new retail refrigeration store at a corner location, 3228 Main St.

The company, headed by B. F. Watts, Jr., general manager, is 42 years old. It has wholesale branches in San Antonio, Beaumont, Dallas, and Shreveport.

The exterior of the new two-story building shows a modified Spanish architecture. Inside the display room, paneled wood walls, and early American furniture are a part of the decorative scheme.

NEBRASKA COOKING SCHOOL ATTRACTS 3,000

LINCOLN, Nebr.—More than 3,000 attended the cooking school sponsored by Gold & Co., Westinghouse electric refrigerator dealer, Oct. 20-24. Miss Florence McReynolds Williams of the General Food Products Co., conducted the classes.

NEW LINCOLN PARK MUSEUM BUYS KELVINATOR COOLERS

CHICAGO—The contract for the water coolers for the Museum of Natural History, under construction in Lincoln Park, has been awarded the Commonwealth Edison Co. Five Kelvinator water coolers will be installed there.

FRIGIDAIRE FOR APARTMENTS

LINCOLN, Nebr.—Swift Lumber and Fuel Co. recently installed 43 model W-4 Frigidaires in the Lafayette apartment house.

THE CONDENSER

ADVERTISING RATE fifty cents per line (this column only).

SPECIAL RATE is paid in advance—Positions Wanted—fifty words or less, one insertion \$2.00, additional words four cents each. Three insertions \$5.00, additional words ten cents each. All other classifications—fifty words or less, one insertion \$3.00, additional words six cents each. Three insertions \$8.00, additional words sixteen cents each.

REPLIES to advertisements with box numbers should be addressed to the box number in care of Electric Refrigeration News, 550 Maccabees Building, Detroit, Mich.

POSITIONS WANTED

SERVICE MANAGER, experienced, capable and energetic. Six years' experience in domestic and commercial refrigeration. Accustomed to handling sales and service engineering problems, directing installation, field service, shop service, maintaining stock room and delivery. Accustomed to handling men and getting enthusiastic cooperation. References. Box 389.

ALERT and aggressive refrigeration executive available. Wants connection where successful past performance will be an asset. Eight years' experience in all lines, backed by nine years' general appliance merchandising. Have organized and trained complete wholesale and retail operations. Will produce results and generate enthusiasm into organization. Married. Age 40. References. Box 397.

ENGINEER, now in New York City, with long experience in Manufacturing, Sales and Service, is desirous of coming in contact with an established Electric Refrigerator Manufacturer with a view to an agency or the production of their products in England. Box 396.

POSITION as service or installation man for electric refrigeration household or commercial equipment. Practical experience, clean character, excellent recommendations. Single, can travel anywhere. Salary not main object. Connection with reputable concern of prime importance. Have own modern tools. Southern born, prefer connection in South. Address Frazier C. McNeill, 424 Fairmont Ave., Pittsburgh, Pennsylvania.

TEN YEARS' merchandising electrical refrigeration. Thirty-five years old. Exceptional analytical ability. Dynamic and intensive in operations. Exceptional personal sales ability, leadership and ability to attract most successful men in industry. Now district sales manager, national organization eastern territory. Could open up 10 highest class distributors next 30 days. Now available. Box 395.

EQUIPMENT FOR SALE

NEW compressors for sale, equipped with valves and flywheel, dehydrated and thoroughly run in. Special prices to contract buyers. Box 394.

POSITIONS AVAILABLE

WANTED—Commercial salesman to represent leading dealer in Tampa on electric refrigeration. If you are not a producer, don't reply. J. H. Harris, 102 E. Lafayette St., Tampa, Fla.

Trained Men Available

When in need of practical, trained shop mechanics, sales, installation or service men, patronize this FREE Placement Bureau. We have competent, trained graduates available in every locality, to meet your requirements. With or without experience. No charge to the men or to you. Write, phone or wire.

Utilities Engineering Institute

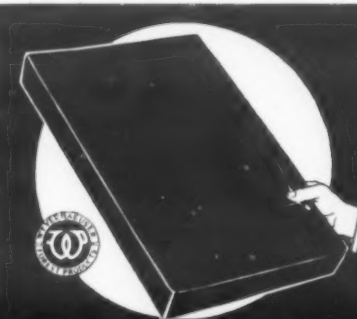
Placement Division
Dept. 4121 404 North Wells St., Chicago

THE IMITATION FOOD PRODUCTS CO.

107 Lawrence St.
Brooklyn, N. Y.

Entering the Eighth Year of successful business

Prices in our catalog of January, 1931, are reduced 20 per cent.



Balsam-Wool
Sealed Slabs
NATIONALLY
ACCEPTED

Completely satisfactory
Refrigerator Insulation

WOOD CONVERSION COMPANY

Industrial Sales Offices:
CHICAGO, 360 N. MICHIGAN AVE.
New York, 3107 Chanin Bldg.
Detroit, 515 Stephenson Bldg.
San Francisco, 149 California St.

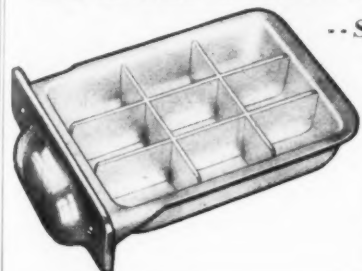
BUYER'S GUIDE

Manufacturers Specializing in Service
to the Refrigeration Industry

SPECIAL ADVERTISING RATE (this column only)—\$12.00 per space.
Minimum contract—13 insertions in consecutive issues.

STOCK PARTS LOWER COSTS

--Speed Up New Model Production



Hoosier Stock Parts save retooling expense, eliminate profitless small operations, stop delays. We ship from stock to meet your production schedules. Send us your specifications for quotation on stock or special designs.

HOOSIER
LAMP & STAMPING CO., EVANSVILLE, IND.

The Next Volume Seller the household Electric Range . . new ELECTROCHEF

Outstanding in value, design and performance

Some desirable territories open for the
outstanding specialty distributor

ELECTROMASTER, INC.

1803 E. Atwater St.

Detroit, Mich.

SPECIAL APPLICATIONS

Complete facilities and long experience at your service to build special designs, sizes and shapes of cabinets and coolers. Expert refrigeration engineering applied to your problems. Send sketch and description of your requirements. Blue prints and estimates will be furnished promptly.

Manufacturers of Soda Fountains and Commercial Refrigeration

VALERIUS CORP.

JEFFERSON, WIS.

Hard and Soft

Rubber Parts for Electrical Refrigerating
Ice Cream Cabinet Parts, including

Lid Collars, Sleeves, Brine Hole Stoppers, etc.

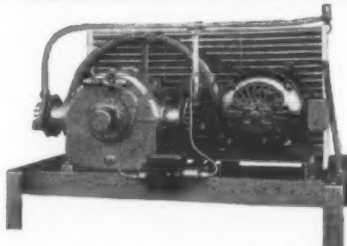
Specializing in Rubber Parts manufactured to customer's specification

Dryden Rubber Company

1014 S. Kildare Ave.

::

Chicago, Illinois



A complete range of sizes for Methyl Chloride, Air or Water Cooled Condensers, Standard or Heavy Duty Types

BAKER Commercial Refrigerating Units

The Profitable Answer to
Every Refrigerating Need

Distributor's Inquiries Invited

Baker Ice Machine Co., Inc.

Manufacturers of Ice and
Refrigerating Machinery for
more than twenty-five years

1518 Evans St. Omaha Nebr.

Double Value for Readers

Here is double value in itself—52 issues of ELECTRIC REFRIGERATION NEWS at the old price for 26 issues—until January 1, 1932.

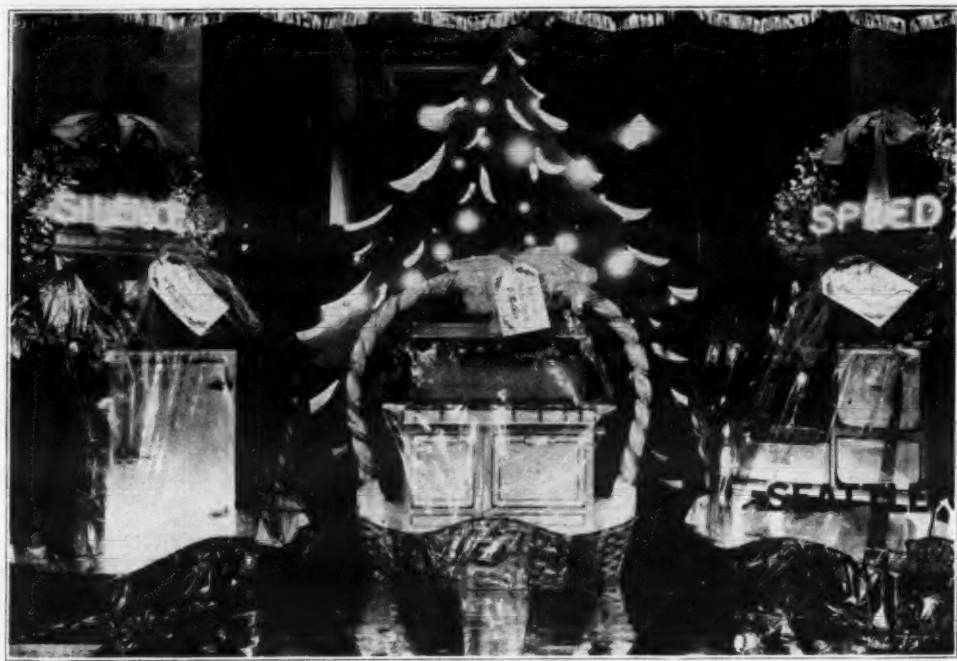
The News, published every Wednesday, is keeping in step with a fast-moving industry. Quickly and accurately it brings you the latest information on new products, new methods, new developments of vital interest to you in your work.

By using the enclosed order blank now you can get the weekly paper at the old price—an actual saving of \$1.00. Better yet, take advantage of the special \$5.00 rate for three years.

Windows and Winners in the Field of Refrigeration



"It takes a pretty big Christmas card to tell all the good things about an Electrolux," is the thought that Phil F. Atlas, display director for the Minneapolis Gas Light Co., must have been trying to drive home with the creation pictured above.



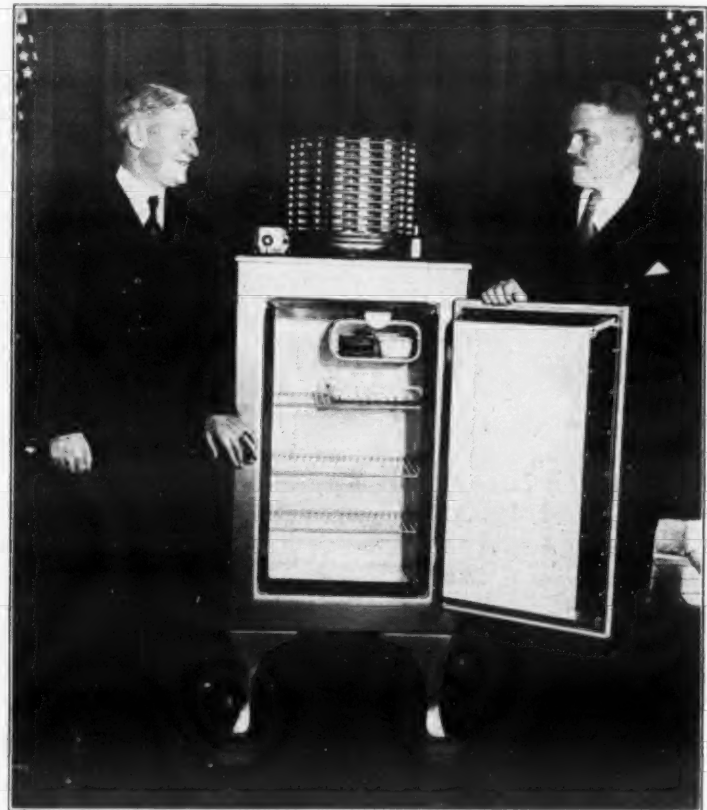
With a refrigerator and two other appliances set in large baskets covered with cellophane in holiday colors, together with some striking Neon light effects, this window of the Seattle Gas Co. drew throngs of the curious.



One thing that's wrong with this country is that it has only a single vice president, these three men will agree. They are (left to right): Russell L. Jones, Wesley E. Downing, and Harry S. Gould, all vice presidents of the Wetmore-Scott Co., Boston Westinghouse distributor.



President W. C. Wiswell of the Wiswell Radio Co., Kelvinator distributor for northeastern Illinois, cashes Kelvinator Derby ticket of T. H. Dempsey of Oak Park, at a party in the Congress hotel.



"From one politician to another," Phil Harrison might well be saying as he presents this golden G. E. refrigerator to Gov.-elect Moore of New Jersey. Phil, G. E. distributor for northern New Jersey, has been doing some politicking in the Refrigerania presidential campaign.



The window above comes fairly close to representing the perfect Christmas morning for the unemancipated housewife. The various appliances are wrapped in holiday packages (Electrolux refrigerator on the right), and grouped around the tree in this Minneapolis Gas Co. display.



Yes, sir, a refrigerator is a gift right from Santa's Arctic domicile, if you stop to think about it. One George Cullen of the Harrisburg Gas Co. thought about it enough to incorporate the idea into this attention-getting window display.

ELECTRIC REFRIGERATION NEWS

Registered U. S. Patent Office

The business newspaper of the refrigeration industry

ISSUED EVERY WEEK
VOL. 6, No. 13, SERIAL No. 141

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DETROIT, MICHIGAN, DECEMBER 2, 1931

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Aug. 1, 1927, at Detroit, Mich.

TEN CENTS PER COPY
TWO DOLLARS PER YEAR

UNIVERSAL MOVES FACTORY TO OLD NIZER LOCATION

**Plant Facilities Doubled
By New Production
Arrangement**

DETROIT—Manufacturing capacity of the Universal Cooler Corp. was doubled last week with the removal of its two plants, one at Eighteenth and Howard Sts., the other at 1560 Theodore St., to the factory building at Green and Melville Sts., here. The new plant was formerly occupied by Nizer Corp. and the Electric Refrigeration Corp.

Production facilities can again be doubled, according to G. M. Johnston, president, when it becomes necessary to employ the remainder of the 132,000 sq. ft. available.

Further specialization of production methods and the enlarged manufacturing space are expected to reduce production costs, Mr. Johnston believes.

Offices are located on the second floor of the building, while the manufacturing operations are conducted in the one-story, saw-tooth roof, brick structure adjoining. Skylights offer good lighting for the production lines. Railroad facilities are provided in the storage and shipping building by a siding on the Pennsylvania and Wabash railroads.

Line production has been arranged in the new manufacturing set-up. Cabinets arrive in railroad cars, are loaded on trucks, and rolled through the plant for installation of compressors and cooling units, and back to the railroad siding without removal of the cabinet crates.

Present capacity permits 426 domestic cabinets to move through the plant in one day.

Compressor castings travel by truck from the machine shop to the assembly bench, and thence to the run-in racks and to test benches. Here they must pump from 150 to 200 lbs. pressure, depending on their size, and pump very nearly a perfect vacuum in a fixed time, measured by a stop-watch.

Machine bases start at one end of a conveyor, rolling its length while workmen assemble the various parts of a complete condensing unit. Then they are again tested, and finally placed in domestic cabinets or shipped as individual condensing units.

J. C. YOUNGLOVE IN CHARGE DRY-ZERO DEPARTMENT

CHICAGO—James C. Younglove, former director of Johns-Manville Corp. and that company's general sales manager of the western division transportation and government department, has resigned to become general manager of the transportation and government divisions of the Dry-Zero Corp. and the American Hair and Felt Co.

The appointment of Mr. Younglove, who will continue to specialize in insulation for the railroad transportation field, follows the establishment by Dry-Zero and American Hair and Felt of their own direct sales organization for marketing their products in the railroad field.

Mr. Younglove was associated with the Johns-Manville Corp. for more than 30 years. With J. E. Meek he organized the railroad department of the Johns-Manville Corp.

LeNOIR JOINS ALLEN-BRADLEY AS SPECIAL REPRESENTATIVE

MILWAUKEE, Wis.—Eugene F. LeNoir, former president and general sales manager of the Union Electric Mfg. Co., has joined the Allen-Bradley Co., here.

Mr. LeNoir will contact with motor manufacturers through the Allen-Bradley district offices and agents, as a special representative.

FOURNESS DEVELOPMENT BUYS H. C. MARCUS & CO.

SAN FRANCISCO—The Fourness Development Corp. of New York City has just purchased the H. C. Marcus & Co., 152 Fremont St., of this city, and moved its local office to the same building. Both organizations are engaged in the development of refrigerating equipment for refrigerated trucks.

Attentive to Good Service



Westinghouse service managers gather for a snapshot just before a session of their annual service conference at the Mansfield plant. Daily meetings were held, Nov. 16 to 20, under the direction of L. K. Baxter.

NEW PLANT TO MAKE CO₂ ICE FROM FLUES

SAN FRANCISCO—The California Carbonic Ice Co. has just closed a lease with the Pacific Gas & Electric Co., for the half-block close to power Station A fronting on Illinois St., Twenty-Third St., and Third St., with a total area of 40,000 sq. ft.

The company will proceed at once to erect a \$500,000 plant to manufacture CO₂ ice under the name of "Super-Ice," it was announced. The new plant will extract carbon dioxide gas from the stacks of a power station.

The fact that the Pacific Gas & Electric Co. is using natural gas as a fuel, which is sulphur-free, makes possible the development of this industry in San Francisco, company officials explain. Otherwise purification apparatus would be required, increasing cost and limiting adoption of the product by the trade.

There will be 65 people employed at first in three shifts. At the beginning of operations the capacity will be 50 tons per day. This will use but a small amount of available gas, which is estimated to run as high as 50 tons per hour so that as the business grows the plant may be greatly expanded at present location.

Officers of the new company are: E. W. Wilson, president; C. H. Sooy, vice president; E. J. Thompson, treasurer; Frank P. Helm, secretary, and H. A. Kehler, C. A. Winder, consulting engineer, is the director of engineering for the enterprise.

The California Carbonic Ice Co. operates the National Carbonic Ice Co., with offices here.

Vilter Designs Big Rotary Booster Compressor

By Robert S. Wheaton
Vilter Mfg. Co.

MILWAUKEE—A patented sleeve rotor has been incorporated in a new type of rotary compressor by the Vilter Mfg. Co., here.

The chief field of application of the new rotary compressors is in the "booster" type of installation. Vilter engineers say, where low-pressure ammonia gas at zero pressure or a partial vacuum is put through one stage of compression, to about 45 lbs., and the discharge from the rotary compressor is conducted to the suction line of a reciprocating compressor.

They are also suitable for pressures up to 250 lbs., officials of the company claim, by designing the housings and compressor casing to withstand the higher pressures.

As shown in the cross-sectional view on page 8, the rotor sleeve slides on an eccentric which is keyed to the shaft and rotated by a pulley. Oil is forced under pressure between the faces of the eccentric and the rotor sleeve.

The outside face of the rotor sleeve revolves past the blade only a very small amount on each revolution, engineers explain, and this small shifting at each revolution presents different points of register between the housing or cylinder's inside face and the outside face of the rotor sleeve.

This action is employed because with metals of different hardness, if the same

(Concluded on Page 8, Column 3)

ARMCO DISTRIBUTORS CONGREGATE DEC. 9-10

MIDDLETOWN, Ohio—Bruce Barton, well-known editor and advertising executive, will address the Armco Distributors' Association during its two-day convention at the American Rolling Mill Co. plant here, Dec. 9 and 10.

Other speakers will be Charles R. Hook, president of the company; Jack Stowell, Aurora, Ill.; and A. H. Larsen and J. L. Marshall, district sales promotion managers of the Plymouth Motor Corp.

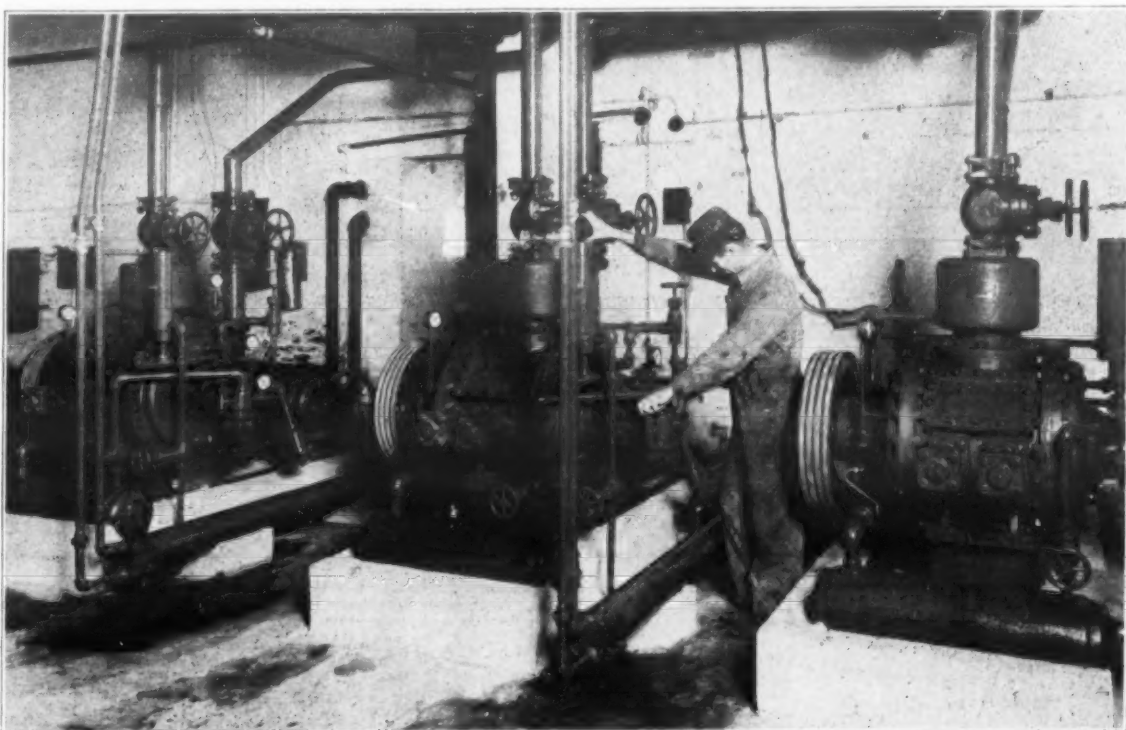
Those who attend the convention will be welcomed by President Quincy W. Wales at the opening session. Association officers will make their reports, followed by Mr. Hook, who will speak on "Business Conditions as I See Them." Mr. Larsen and Mr. Marshall will dramatize the merchandising campaign used to promote the sale of the new Plymouth car, to demonstrate selling methods.

At the banquet Dec. 10, Mr. Barton's speech will be given. He is president of Hatten, Barton, Durstine, and Osborn advertising firm.

The second day of the conference will be given to discussion of merchandising, advertising and engineering methods. Besides Mr. Wales, other officers of the association are: A. J. Luedke, Milcor Steel Co., vice president; George O. M. Johnston, McClure-Johnston Co., secretary-treasurer.

Bruce Haines, Hammond Sheet Metal Co.; A. W. Howe, J. M. and L. A. Osborn Co.; and G. L. McKewin, Farwell, Ozman, Kirk & Co., are members of the executive committee.

New Rotaries on Booster Service



Three new Vilter rotaries doing booster service in the plant of the Texas Ice & Refrigerating Co., Ft. Worth, Tex. Each has a capacity of 200 cu. ft. of gas per minute, operating at 900 r.p.m.

FIELD ENGINEERS OF WESTINGHOUSE DISCUSS SERVICE

**Installation, Adjustment
Methods Studied
In Conference**

By John T. Schaefer

MANSFIELD, Ohio—Men who are responsible for service and installation work in Westinghouse distributing organizations east of Denver completed a week's intensive educational program here, Nov. 16 to 20, under the direction of L. K. Baxter, service manager of the Westinghouse refrigeration department. Approximately 65 men were in attendance.

Prominent among the subjects discussed was the matter of training dealers' service managers to handle service calls intelligently and diplomatically, and the most effective methods of conducting schools in the field to teach the best methods of installing and adjusting the Westinghouse refrigerator.

Engineers from the East Springfield, Mass., plant of the company, where the major part of the refrigerator manufacturing is done, were on hand during the week to explain the technical operation of the machine, and to confer with field men in discussing design and manufacturing changes which would result in simpler service and installation work.

Mr. Baxter named committees which met each night in the Mansfield-Leland Hotel to formulate recommendations for the entire field organization on the following topics: Deliveries and Installation, Dealer Training, The Unit, The Cabinet, Warehousing and Stocks, and Handling of Inoperative Material.

The conference opened Monday morning, Nov. 16, with a welcome address by C. E. Allen, commercial vice president of the company, and Mr. Baxter presiding. Mr. Allen's talk, as reported briefly in the last issue of the *Engineering Section*, pointed out the effect of good service in future sales.

Carl D. Taylor, manager of the refrigeration department, was next on the morning's program, emphasizing the permanency of refrigeration as a profession, and prophesying a good year in 1932.

E. B. Arnold, service manager of the central division, then started the technical session.

(Concluded on Page 4, Column 3)

A.S.M.E. NOW IN NEW YORK FOR ANNUAL CONFERENCE

NEW YORK CITY—Mechanical engineers have gathered for the annual meeting of the American Society of Mechanical Engineers in society headquarters here, this week.

Among the topics discussed on Monday were machine-shop practice and applied mechanics, reports on the new developments in materials handling, and metal cutting.

On Tuesday, Dec. 1, outstanding discussions were those on casting and machine design, and on industrial power. The Ford Co.'s 1,200-lb. steamplant installation was also described at the latter. Wednesday talks on engineering economics will be given, as well as two on lubrication engineering.

Some important sessions on Thursday will be those on management research and on metal rolling. Friday will be devoted largely to council meetings.

FRIGIDAIRE COOLER INSTALLED IN HOOVER'S BEDROOM

WASHINGTON, D. C.—President Hoover's bedroom has been equipped with a Frigidaire room cooler by the Baltimore branch of Frigidaire Corp.

Its installation is such that it can be removed and stored away during the cold months of the year. The equipment was installed in the fireplace of the room.

R. & H. RESEARCH ENGINEER JOINS SNELL

NIAGARA FALLS, N. Y.—Harry J. Hosking has resigned his position in the research laboratory of the Roessler & Hasselbacher Chemical Co. to take up similar work with Foster D. Snell, Inc., 130 Clinton St., Brooklyn, N. Y.

BRIDGEPORT HYDRAULIC CO. BUYS FILTRINE COOLERS

BRIDGEPORT, Conn.—The new building of the Bridgeport Hydraulic Co., just completed, has been equipped with a complete Filtrine Circulating system and Servel refrigeration machine by the Automatic Refrigeration Co.

The plant consists of a Filtrine No. 5, 25-gal. storage cooler, two No. 4 Filters for the drinking water, and a model 65-BW Servel machine. A Westco Chip-pawa pump is used for circulating the drinking water.

In order to conserve space, the Filtrine cooler is mounted on a frame over the refrigerating machine which also supports the circulating water pump. The entire equipment takes up only 36x20 ft. of floor space.

Link-Belt Co. Develops Midget Chain Drive

CHICAGO—Engineers of the Link-Belt Co., here, claim to have the world's smallest silent chain drive in their new 3-16-in. pitch chain which they have introduced for use with phototone machines, power cameras, television apparatus, oil burners, and other places where a small positive drive is needed from fractional horsepower motors.

It is made in three types—middle guide, side flanged, and duplex. The first two are employed where all shafts are driven in one direction, and the duplex chain where reverse direction is desirable on some shaft or where adjustment features are necessary.

Power transmission engineers may obtain the new folder, No. 1260, describing the new chain drive, by writing to the Indianapolis office of the company.

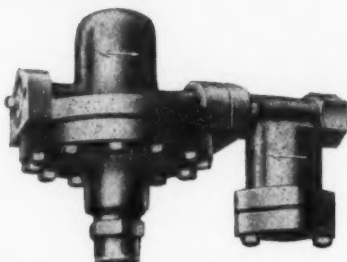
POLAR AMMONIA EXPANSION VALVE

• Service is Expensive •

The best refrigerating machine ever built is only as good as the expansion valve used.

Many inferior expansion valves have condemned some of the best installations. Use of POLAR PRECISION BUILT AMMONIA EXPANSION VALVE will eliminate considerable expense.

Write for further details

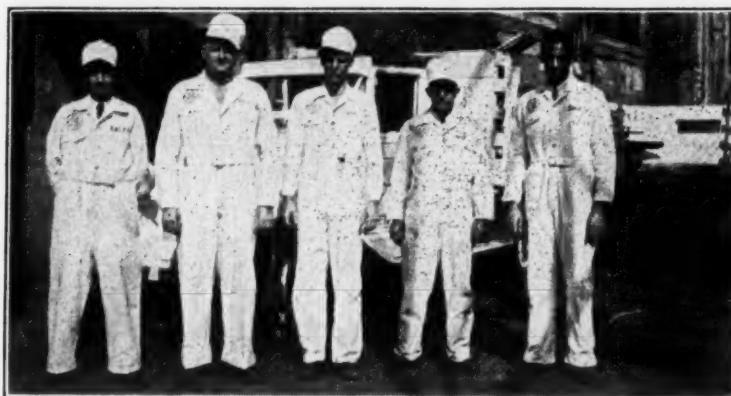


Atlas Copper & Brass Mfg., Co.

2734 High Street

Chicago, Ill.

Service Men's Styles



The personnel of the product department of the Ahrens Refrigerator Co., General Electric distributor of Oklahoma City, Okla., are sporting new uniforms. From left to right appear Ralph Griffy, Emery Boatman, Joe McKenzie, W. O. Wilson, and John Cole. "General Electric Refrigerator" is emblazoned on the back of the uniforms, while the G. E. monogram and the man's name appear on the front of each.

FITKIN MEMORIAL HOSPITAL GETS FILTRINE COOLERS

TRENTON, N. J.—The Binder Electrical Supply Co. recently installed two Filtrine No. 5 coolers with Copeland compressors in the new Fitkin Memorial Hospital, Asbury Park, N. J.

This equipment, installed in each of two wings of the three-story main building and located in the janitors' closets, furnishes chilled water to fountains on the same floor and to floors above and below. Remote fountains were connected to the cooler by 3/4-in. brass pipe insulated with ice water cork insulation. Filtrine No. 4 filters were installed on the outlet of each cooler.

YORK MACHINE COOLS WATER FOR PHILADELPHIA BUILDING

PHILADELPHIA—The new 34-story Lincoln-Liberty Bldg., Broad and Chestnut Sts., an office structure in the heart of the business and shopping district, has just been equipped in every office with purified and filtered ice water. The system is circulated throughout the building from a central York Ice Machinery Co. cooling plant, using carbon dioxide as the refrigerant.

AMBASSADORS' WINES COOLED BY FRIGIDAIRE

WASHINGTON, D. C.—Wine cellars of the foreign embassies here have been equipped with Frigidaire cooling equipment by the Baltimore branch.

Through these installations, the embassies are assured of keeping their liquors at the proper temperatures, and have their sherry or champagne ready to toast their guests.

AIRCRAFT COMPANIES NEED LIGHT MACHINES

STRATFORD, Conn.—The need of a light weight mechanical refrigeration unit for use on air liners was indicated here when the Sikorsky Aviation Corp., a division of United Aircraft and Transport Corp., was forced to employ ice as a refrigerant in the galley of its new giant amphibian, the S-40.

The Sikorsky engineering department endeavored to find a unit which would fall within the weight limit permitted for the food storage equipment. A special cabinet of 4 cu. ft. capacity was built by the company, using Balsam Wool insulation. The box was designed to keep a small quantity of foodstuffs in good condition for the 41 passengers and crew of four carried by the huge aircraft.

Various means of refrigerating the cabinet were considered, according to Serge Gluhareff of the engineering department, but it was finally decided that a 20-lb. cake of ice was the only practicable refrigerant.

No mechanical unit could be discovered which weighed within 75 lbs. of the required maximum. The weight allotment for box, unit and contents is but 50 lbs.

The small cake of ice was found to be sufficient for the purpose, as the plane will never be in the air more than six hours at a stretch, its maximum cruising range with full load, and in most instances the time between landings will be considerably less than that, according to Mr. Gluhareff.

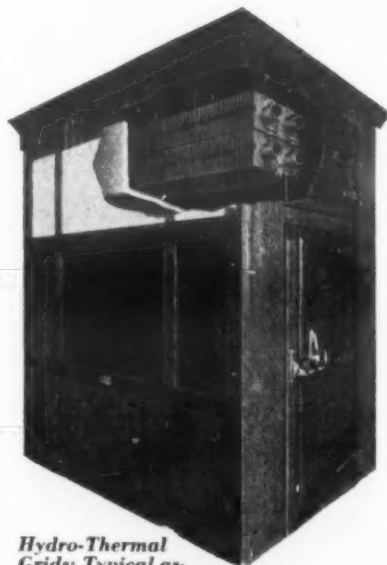
"Solidified carbon dioxide was considered as a refrigerant," Mr. Gluhareff said, "but was discarded because of the virtual impossibility of obtaining it in many remote Central American cities which the air line touches."

It was pointed out that if direct power could be secured from some source within the ship, making a motor in the unit necessary, the compressor's weight could be cut considerably. However, it is considered doubtful if such direct power could be secured, and in any event, the reduction of weight would not be great enough to bring it within the stipulated maximum, the engineer explained.

HYDRO-THERMAL GRIDS



These grids help you sell Refrigeration Equipment



Hydro-Thermal Grids; Typical assembly of four standard units in refrigerator.

HYDRO-THERMAL Grids must be good...the rising curve of sales proves it.

Your customers want the practically frostless refrigeration, the high capacity, the quick chilling, which Hydro-Thermal Grids give them.

Wide-awake users of refrigeration recognize in Hydro-Thermal Grids the modern kind of mechanical refrigeration...a refrigeration that is non-dehydrating...that does not dry out foods...they insist on having it.

Dealers who sell Hydro-Thermal Grids cash in on the universal desire for the best and newest in modern refrigeration. Experience during the past year has shown, too, that Hydro-Thermal Grids will help you to sell other refrigerating equipment...they mark you as a leader in the refrigeration field.

AMERICAN ENGINEERING CO.
2420 Aramingo Ave. Philadelphia, Pa.

Everlastingly - - -



- - one solid, seamless, copper tube

not a crack, a flaw, or weak spot. Work it any way—swedge, flare, bend—it is perfect and stays that way. For refrigerants, water, air, oil—the cheapest—and best.

Dehydrated and Sealed Coils

Made to A. S. T. M. specifications (B68-30T). Plain or tin plated. Prompt shipment.

WOLVERINE TUBE CO.

SEAMLESS COPPER BRASS & ALUMINUM

1491 Central Ave.

Detroit, Mich.

Phone Vinewood 1-5000

Export Department—H. M. Robins Company, 120 Madison Ave., Detroit, U. S. A.
Cable Address: Robins, Detroit.

Sales offices in 26 cities. Stock available at Los Angeles, 224 E. 11th St. Write or wire for name of nearest representative.



KEROTEST

back seating

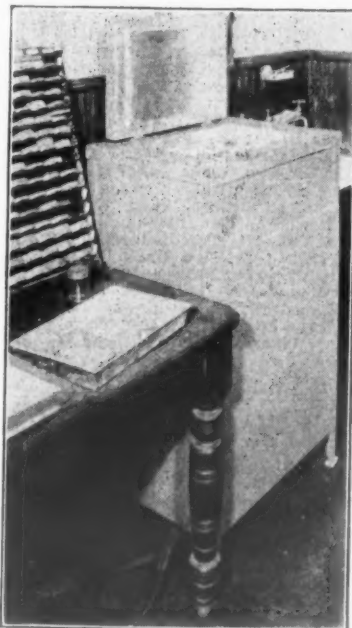
REFRIGERATION VALVES

REFRIGERATION EMPLOYED IN LENS MANUFACTURING

POUGHKEEPSIE, N. Y.—Electric refrigeration has been put to work in the grinding of lenses for eye glasses by the Hudson Valley Optical Co. of this city, according to Don Weed, dealer contact representative for the Fiske Supply Co., Albany, Copeland distributor. The installation had been made by Traves & Quinn, Copeland dealers in Poughkeepsie.

"In grinding lenses," said Mr. Weed, "I learned that it is first necessary to cement the lens on an iron block about 2 in. in diameter. After grinding and

Refrigerating Lenses



polishing, the lens is removed from the iron block by lowering the temperature until the cement releases the lens.

"The old method was to place the iron block and lens on a cake of ice. This method was expensive and messy. Ice was seldom available at the moment it was wanted, and it was difficult to lower

the temperature of the block sufficiently to procure a clean release, free from cement on the lens."

The Hudson Valley Optical solved the problem by installing a model AM-200 Copeland condensing unit in a special self-contained cabinet, with a special brine tank placed on top of the cooling unit.

This cabinet is insulated with 4-in. cork board. On top of the cabinet is a door giving access to the top surface of the brine tank. The installation is thermostatically controlled to hold zero temperature brine.

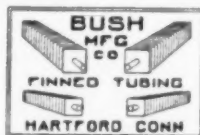
By using mechanical refrigeration at low temperatures, the lenses release themselves in about 30 seconds, executives of the optical company report.

CONDENSERS

STANDARD SIZES OR TO YOUR SPECIFICATIONS

FINNED TUBING

FOR BOTH HIGH
AND LOW PRESSURE
SYSTEMS



IN COPPER, BRASS
ALUMINUM OR
STEEL

THE BUSH MFG. CO.
HARTFORD, CONN.

W. H. MARK HANNA 6-247 General Motors Bldg. DETROIT, MICH.
REFRIGERATOR APPLIANCES, CHICAGO VAN. D. CLOTHIER, LOS ANGELES

Westinghouse Awarded Forbes Prize On Industrial Relations Program

EAST PITTSBURGH, Pa.—The industrial relations program, evolved by the Westinghouse Electric & Mfg. Co., was designated one of the nation's best and given a capital award in a contest recently conducted by B. C. Forbes.

A prize of \$200 was included in the award and presented to W. G. Marshall, in charge of employee relations. Mr. Marshall immediately gave the check to the Westinghouse cooperative committee for emergency relief.

The Forbes contest, conducted to determine the best industrial relation plans, was entered by 380 companies in the United States.

Judges of the contest were Dr. Magnus W. Alexander, president, National Industrial Conference Board; Henry Bruere, president, Bowery Savings Bank of New York; Dr. Julius Klein, assistant secretary of commerce; Sam A. Lewisohn, chairman of the board, American Management Association; and B. C. Forbes, editor of *Forbes Magazine*.

Winners of the four capital awards were those who were conducting the most complete and thorough-going industrial relations program, viewed in the light of present day requirements.

The Westinghouse Electric industrial relations program, according to its sponsors, includes a relief fund to provide for the contingencies of sickness or injury while off duty; a trusted savings fund, paying 6 per cent interest up to a certain savings total, thereafter 4 per cent; an annuity plan for old age in-

dependence—Westinghouse now has a fund of \$2,500,000 to provide for its obligations incurred under this plan; a group insurance plan by which employees, at this time, are protected in the amount of \$98,000,000; an education and training plan; housing and building and loan program, through which it has financed and built 711 homes; an incentive plan for executive and supervisory force; and a conservation of health plan, which includes safety measures, physical examinations, and medical service.

There is also a program of miscellaneous welfare work which includes the development and maintenance of proper dining facilities; a suggestion system, by which employees are paid for worthwhile ideas; legal advice; and employment conferences to provide direct relationship between employees and management.

More than 37,000 employees are covered by group insurance, totaling \$98,000,000; and the sum of \$4,048,400 has been paid beneficiaries as death payments since the inception of this insurance plan March 1, 1920.

The company has aided 771 employees in the erection of their own homes which have a value approximating \$3,900,000; 991 employees during 1930 received the sum of \$700,000 as relief benefits due to accident while off duty or to illness; 572 employees on the retirement roll received a total of \$165,000 per year; 12,000 employees have on deposit \$4,000,000 in the Savings Fund; 607 employees are in the Building and Loan Fund whose assets total \$517,500.

There are 10,000 people in the Westinghouse organization each with over 10 years' continuous service; and some 3,000 persons whose service extends over a period of more than 25 years.

The total cost to the company of this entire program has averaged \$1,938,352 per annum, which is approximately 2.75 per cent of the total payroll.

GERMAN PATENT GRANTED ARMCO ON SHEET ROLLING

MIDDLETOWN, Ohio—The American Rolling Mill Co. has just been granted a German patent for its continuous sheet mill development.

This continuous sheet rolling process was developed at The American Rolling Mill Co.'s plants. Licenses have been granted and mills built by several other steel companies in the United States.

The German Patent Office is conducted upon different principles than that of the United States in that before patents are granted, they are made public to invite opposition by interested parties.

NEW CONNECTICUT COMPANY STARTS IN REFRIGERATION

MILFORD, Conn.—Organization papers have been filed for the Sawyer Engineering Co., which will engage in the manufacture, assembly and sale of refrigerator equipment.

Capital stock is \$50,000, of which \$3,000 is paid in. Incorporators are John K. Sawyer, William B. Sorenson, and Mervin A. Pond.

KEROTEST Valve designers have worked hand in hand with refrigeration engineers to produce a line of refrigeration valves with unique advantages of design found in no other types.

The patented back seating metal to metal joint is a noteworthy example—a feature which makes them the only valves obtainable with a double seal.

As you may note in the above illustration, we have designed the end of the stem so that the bevelled sides make a positive metal to metal closure against pressure in both the open and closed positions.

In Kerotest, you have a choice of 1, 2 and 3 way valves with packing or in the diaphragm packless type—each one of which is pressure tested and pressure proved. They are all listed as standard by the Underwriters Laboratories.

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Small Dealer Training

GRANTING electric refrigeration franchises to many small dealers in small outlying towns, one of this year's movements in the industry to extend distribution, introduces a problem in dealer training which some organizations have met successfully by holding numerous small service schools to which dealers' service men do not have to travel an unreasonable distance to attend.

These non-metropolitan areas are apt to be the least informed on electric refrigeration. And when a service situation develops which the dealer is not prepared to master, the distributor may have to go to considerable expense to send out a trained service man.

To send a factory engineer out from the main office, or for a distributor's service manager to make a special trip to instruct the service man of each new dealer, is costly and a waste of effort in the many territories where several dealers could just as well be represented when instruction is to be given.

Factory Schools Too Distant

On the other hand, the small dealer who handles only a comparatively few electric refrigerators a year is usually not inclined to stand the expense of sending his service man several hundred miles to attend the regular factory schools given for distributors' service managers.

The small dealer's profit from the sale of refrigerators, limited by the size of his community and its financial resources, doesn't usually warrant a large appropriation necessary for giving his service man a complete education in refrigeration.

The design of electric refrigerators has advanced to the point where little service is necessary. When a serious defect appears in a machine, the factory usually provides for replacement—free if it was sold within the guarantee period.

Minor adjustments are supposed to be made by the dealer who sold the refrigerator, and to do this intelligently it has been found necessary for the dealer's service man to study the principles of refrigeration as applied by his particular make of machine, and to understand the operation of the various parts of the machine.

Territories Divided

One workable plan is for the individual distributors to divide their territories into sections for instructional purposes, and conduct schools in them regularly or whenever training seems especially desirable.

It has been found helpful to have a factory engineer present as often as possible to help with the schools and give direct expression of the technicalities of the machine with which the manufacturing organization is most familiar.

A two-day school seems to be more than twice as valuable to the service man as a one-day school. One-day schools are usually limited to necessarily brief discussions of the cycle of operation, adjustments, and installation methods.

Two-day schools can give more thorough treatment of such subjects as customer contacts, methods of approaching the customer skillfully when the machine develops trouble, and educating the consumer in the proper use of the refrigerator.

When the field schools are conducted in an establishment where a complete set of spare parts and service equipment are available to supplement the instruction with practical demonstrations, the students grasp the subject of discussion better.

The service men are advised to cultivate the acquaintance of their customers so as to learn better just how a given refrigerator misbehaves, and to gain the user's confidence in explaining that the necessity for minor adjustments occasionally is not a reflection on the quality of the machine.

In some instances, the practice of leaving a questionnaire with the customer for remarks regarding the performance of the refrigerator has been found useful in educating the housewife to the proper uses of refrigeration.

Installation Work Stressed

Field schools stress the importance of making thorough, neat installations, and point out that well-done installation work contributes to the elimination of service calls.

Service and installation manuals are the text books in these schools, the instructors taking advantage of the opportunity to explain and demonstrate the practical methods presented in them.

One of the prime requisites of good service work is good tools. Students are urged to equip themselves with all the necessary equipment, and are shown how to use it properly.

To promote friendship among service men in neighboring sections, dinners and entertainment in connection with field schools help break down the reserve of strangers and provide a valuable medium for interchange of experiences and ideas.

This plan of conducting field schools in numerous well-chosen places in a distributor's territory has the advantage of permitting intimate contact between the instructors and the students because a small number of service men can attend each one, and, in addition, accomplish more training than is possible by a travelling representative of the manufacturer.

GLEANINGS FROM RECENT PERIODICALS

Kettering on Air Conditioning

HE WAS speculating on the house the next generation would build—this strange genius "Boss Ket," or rather Charles F. Kettering, head of the great research laboratories of General Motors.

At the start I thought he was putting the cart before the horse—but shortly I found that he is as wise in this as he is in other things.

"First of all, you'll want to build this house of the future on an acre or two of good Mother Earth," the man behind the electric starter, Delco, and hundreds of automobile improvements explained, letting his tall, gaunt figure slump comfortably down in a deep chair. "You know, in this country we've forgotten that cities and machines are useful only as they help life—as they teach men healthier and happier living. Machines and standardization breed that deadliest peril of all—monotony. And monotony is what really brings on war and kills man and his blessed imagination. After all, man must have adventures."

"And what will this house of the future be like?" I asked.

"Well, on the outside it won't look so very different from houses today," he answered. "Maybe instead of brick or wood it will be constructed of some manufactured composition of wood or fiber or cornstalks. It will have double windows with air spaces between the panes—and these windows will never be opened. We will beat nature all hollow when it comes to air and light."

"You see, every breath of air will be 'conditioned'—that is, it will be washed, heated or cooled and given the exact humidity desired. No more sticky, muggy summer nights—and no more of these dry, moistless winter days. And by turning a dial in the wall we will flood this future house with exactly the light radiation that your body needs."

"Boss Ket" was warming up. "You know this air and light conditioning will be one of the most important steps that man has ever taken for the improvement of his health. Why, once homes, offices and factories install proper air- and light-conditioning equipment, the general health of the human race will improve as if by a miracle. We'll knock the stuffin' out of the common cold, that today is one of the most irritating enemies of mankind."

"And we'll cook our food far more intelligently. This future kitchen will be a regular electric factory, full of gadgets and what nots that will not only be labor- and time-savers but will do a better job. The problem of dinner will be a matter of 30 minutes."

"Oh, it will be an exciting house," he went on. "Through television, we'll have the whole world brought to our living room. The finest music and art will be ours for a turn of the dial."

He hesitated a moment. Then he added: "But most important of all is that acre or two of ground. You know, there is something mystic about soil and sunshine. Man, like all other life, must have these two things. Maybe the inside of this future house can be better regulated by man than by nature, but outside we'll want the good old soil and sunshine."

"Say, I'd like to be young again and some day build one of these houses."—*Cosmopolitan*, December.

Westinghouse Service Managers Meet To Discuss Field Methods

(Concluded from Page 1, Column 5)

nical discussions of the week with a review of the cycle of refrigeration as employed in the Westinghouse machines.

Committee appointments were then made by Mr. Baxter, and arrangements made for them to meet evenings during the week and report their findings in daily meetings of the conference. Reports of committees are published elsewhere in this issue.

Dan Frain, service manager of the southwestern division, presided over the Tuesday morning meeting which included a report of the delivery and installation committee, of which M. A. Bergstrom of Chicago was chairman.

J. A. Vassar, assistant service manager, showed the delegates the new 1/4-hp. condensing unit which has been developed for large cabinets, such as are used in delicatessens and restaurant installations, and demonstrated practical methods of placing it in a refrigerator. He also discussed the electrical circuit in the morning meeting.

Milton Kalischer, engineer from the East Springfield works, opened the Tuesday afternoon meeting with an explanation of the engineering development work which preceded Westinghouse's entrance into the refrigeration industry, and described the present engineering organization and research equipment in East Springfield. He treated the electrical phases of machine operation, and answered questions about current consumption. A report of Mr. Kalischer's talk appears on page 5.

Committee reports on "The Unit," and "Dealer Training," comprised most of the Wednesday morning meeting. P. F. Sacco, Pittsburgh, headed the Unit Committee and presented its recommendations, while H. E. Burrett, New Haven, gave the Dealer Training Committee's report as its chairman.

Wednesday afternoon Mr. Baxter told the assembled delegates about "Field Adjustments" and was followed by G. F. Forsthoefel, cabinet engineer from East Springfield, who discussed cabinet design problems.

Mr. Vassar next discussed settings of the various controls on the Westinghouse refrigerator, giving particular attention to adjustment of controls on water coolers which are now being placed on the market on a commercial scale.

Thursday's meeting included a committee report by J. D. Bridges, Philadelphia, on "Handling of Inoperative Materials," and a report by M. O. Mosteller, Atlanta, of his committee on "The Cabinet." R. C. Cosgrove, commercial manager of the Westinghouse refrigeration department, outlined the company's plans in commercial refrigeration, and Mr. Baxter discussed service

BERGSTROM RECOMMENDS SUPERVISED DELIVERIES

MANSFIELD, Ohio—Although delivery and installation methods vary considerably in various parts of the country, the experience of Westinghouse service managers from the larger distributing organizations were gathered by the committee on Delivery and Installation, and presented as approved methods by M. A. Bergstrom, chairman of the committee.

The Delivery and Installation Committee included M. A. Bergstrom, Frank H. Johnson Co., Chicago, Chairman; H. E. Perrett, Westinghouse Electric Supply Co., Detroit; H. F. Newport, Danforth Refrigerator Co., Cleveland; James Law, Edgar Morris Sales Co., Washington, D. C.; F. E. Gilmore, Times Appliance Co., New York City; John Fortune, Lindburg Co., St. Louis, Mo.; H. S. Zang, McCarthy Bros. & Ford, Buffalo; and G. C. Abbott, Times Appliance Co., New York City.

"A foreman or some other responsible employee of the distributing company should always be on hand when a truck is delivering a refrigerator to the customer," the committee said. Direct supervision of delivery is important because delivery marks the first contact of the service man with the customer.

Practice of delivering refrigerators crated or uncrated vary, Mr. Bergstrom explained, and reported that in the Chicago and New York territories WL-45 and WL-65 models are delivered uncrated, while others are delivered crated and crates removed on the consumer's premises.

The Slingabout has been found useful on WL-75 machines and for the deluxe models, the committee reported. It pointed out, however, that the delivery men should remember to clean out dirt which gathers in the Slingabouts.

Regarding delivery promises, the committee urged that the delivery organization always have 24 hours' notice, and 48 hours' notice on a financed sale.

Inspection of the installation should be made from 24 to 48 hours after it was put in, the committee recommended, to tell the customer about food placement in the refrigerator, how to defrost properly, and other facts of operation which the buyer may have forgotten since the sale was made.

work on commercial refrigerators.

Expansion valve adjustments were briefly treated by R. B. Lewis, service manager for the southeastern division, and the conference closed for the day somewhat early to prepare for the banquet that night.

An informal banquet Thursday night in the Mansfield-Leland Hotel provided respite from the business of the week. John T. Schaefer, *ELECTRIC REFRIGERATION NEWS*, pointed out the value of a

Westinghouse Host



L. K. BAXTER

Directed the service conference.

reputation for good field service, and the dinner adjourned after a few funny stories and some songs by an impromptu quartet.

J. F. Hendrickson, eastern divisional service manager, discussed "Dealer Training" in the Friday morning session, followed by C. W. Mihle, chief inspector of the East Springfield plant, who talked on "Inspection" and discussed with the group, inspection methods which would tend to make service and installation operations easier.

The committee on Warehousing and Stocks, headed by M. Singer, Philadelphia, then presented its report, and after a round-table discussion, the conference adjourned. A similar conference on service is to be held early in January on the west coast for Westinghouse men out there.

The delegates to the conference were: Walter R. Aagaard, Westinghouse Electric Supply Co., Chicago; F. J. Abbott, Times Appliance Co., New York City; Gilbert C. Abbott, Times Appliance Co., New York City; E. B. Arnold, central division service manager; Martin A. Bergstrom, F. H. Johnson-Son-Crowen, Inc., Chicago; J. D. Bridges, Westinghouse Electric Supply Co., Philadelphia; Edward Burke, Westinghouse Electric Supply Co., Milwaukee, Wis.; H. E. Burrett, The Connecticut Electric Refrigerating Co., New Haven, Conn.; M. S. Clifton, Jr., Westinghouse Electric Supply Co., Columbia, S. C.; Raymond J. Creech, Westinghouse Electric Supply Co., Oklahoma City, Okla.; Glenn E. Diddot, Moore-Handley Hardware Co., Birmingham, Ala.; Howard Fieggin, Columbian Electric Co., Kansas City, Mo.; J. A. Fortune, Arthur R. Lindburg Co., St. Louis, Mo.; G. F. Forsthoefel, engineer, East Springfield, Mass.; R. F. Fountain, Wetmore-Scott Co., Inc., Boston, Mass.

Dan Frain, Westinghouse Electric & Mfg. Co., St. Louis, Mo.; F. E. Gilmore, Times Appliance Co., Inc., Brooklyn, N. Y.; R. H. Gordon, northwestern division service manager; L. J. Harris, Westinghouse Electric Supply Co., Rochester, N. Y.; J. F. Hendrickson, northeastern division service manager, New York City; H. J. Hughes, engineer, Westinghouse Electric & Mfg. Co., East Springfield, Mass.; C. O. Johnson, Westinghouse Electric Supply Co., Indianapolis, Ind.; C. W. Kahle, Philadelphia; Milton Kalischer, engineer, East Springfield, Mass.; Bernard Lake, Westinghouse Electric Supply Co., St. Louis, Mo.; James E. Law, Edgar Morris Sales Co., Washington, D. C.; R. B. Lewis, southwestern division service manager, Atlanta; John Lynch, Westinghouse Electric Supply Co., 360 Broadway, Albany, N. Y.; J. W. McCarthy, Westinghouse Electric Supply Co., Sioux City, Iowa; C. W. Mihle, chief inspector, East Springfield, Mass.; E. B. Moore, Tafel-Williams Co., Cincinnati; M. O. Mosteller, Gilham Electric Co., Atlanta, Ga.; William H. Mountain, Mook Electric Supply Co., Youngstown, Ohio; H. F. Newport, Danforth Refrigerator Co., Cleveland.

H. E. Overholt, Wisconsin Sales & Supply Co., Milwaukee, Wis.; F. H. Perrett, Westinghouse Electric Supply Co., Detroit, Mich.; E. H. Pittman, Parks & Hull, Inc., Baltimore, Md.; William Robertson, Brooklyn, N. Y.; M. F. Rowley, Van Zandt Supply Co., Hunting, W. Va.; R. F. Sacco, Iron City Electric Co., Pittsburgh; Edward L. Sacke, The Elgin Co., Philadelphia, Pa.; John T. Schaefer, Electric Refrigeration News, Detroit, Mich.; Howard Sieggen, Columbian Electric Co., Kansas City, Mo.; M. Singer, The Elgin Co., Philadelphia, Pa.; Charles F. Stretch, Penn Electric Engineering Co., Scranton, Pa.; A. E. Swank, American Radio Dist. Co., Columbus, Ohio; Robert J. Topp, Westinghouse Electric Supply Co., Syracuse, N. Y.; J. A. Vassar, assistant service manager, Mansfield; Chas. R. Vogel, Westinghouse Electric Supply Co., Cleveland; Herbert C. Zang, McCarthy Bros. & Ford, Buffalo; G. Zimerle, Westinghouse Electric Supply Co., Toledo, Ohio.

Milton Kalischer Depicts Westinghouse Set-up in East Springfield, Mass.

MANSFIELD, Ohio — Milton Kalischer, engineer from the East Springfield plant of Westinghouse Electric & Mfg. Co., outlined the steps in the development of the present line of Westinghouse electric refrigerators, described the engineering organization and research facilities which are devoted to refrigeration work, and explained the operations of refrigerator motors before the National Service Conference of the company here, Tuesday afternoon, Nov. 17.

"When the chief executives decided to enter electric refrigeration, it was first necessary to establish general policies regarding the amount of money which should be spent in technical development work, sales promotion, and service operations," he said.

After that, further detail was handled by the individual sales, engineering, and service departments."

At this stage of the development, he pointed out, it was necessary to determine what type of machine was to be made. The Westinghouse company decided upon a domestic line for the first year or two, that they should be built for 60 cycles of alternating current only, that the line should include only a few models, and that the condensing units should be hermetic.

In choosing cabinet arrangements and sizes, he reported, the Westinghouse machine embodied certain similarities to existing refrigerators to make introduction to the market easier. The engineers then conducted a study of competitive machines in running times, ice freezing times, and performances, and cost analyses were made to approximate their manufacturing cost.

"Then the first ideas of the new refrigerator were crystallized in drawings," he said, "and the model shop built a few. These first machines were custom-built, not to exact specifications. While they were being tested, the model shops tried some new ideas in other custom-built models."

An "accelerated life-test" was given to some of the early machines to see what effect the equivalent of 25 years of wear would have on them. "These life-tests were not entirely indicative," Mr. Kalischer said, "because the preliminary models usually offer some trouble."

"Design modifications are made on new machines on the basis of the testing, and production drawings prepared for the 50 to 100 machines which are to be placed in the field as sample machines. These are placed in homes of engineers for observation, and in warm southern climates where natural heat is high."

"After the first design work comes the job of production engineering—the difficult job of adopting a design to production. Very often it is desirable to re-design to suit manufacturing demands, and to effect production economies," he said.

About this stage of the game, he pointed out, the sales department usually gets impatient for output, and the engineering department must hold down the sales energy. Also, about this time, the service men report troubles and send in suggestions. "These sugges-

tions are very helpful in simplifying service and installation, improving design, and even reducing manufacturing costs," Mr. Kalischer said.

At first a great many of the component parts of refrigerators are purchased from outside suppliers because the immediate problems occupy most of the engineering department's time, he explained.

As time goes on and design and production problems are ironed out, the engineers begin to look for places to reduce costs and to make more of their own parts.

The engineering department includes five sections, he stated. The technical section studies component parts and materials; the unit section makes up working drawings from preliminary information about a new development; the cabinet section does the same on cabinet construction; the commercial section is busy doing preliminary work on commercial machines in cooperation with the unit, technical, and cabinet sections; while the drafting department works with all in preparing working drawings for all.

Both hot and cold rooms are used for refrigerator testing in the experimental laboratories, the cold rooms being necessary because of such conditions as those on a customer's back porch where a refrigerator might keep foods at correct temperatures, but fail to freeze ice cubes properly, he explained.

"In another room humidities can be run up to 100 per cent relative with 110° F. temperatures, or down very low by dehumidification," he said.

When asked about motors, Mr. Kalischer explained that there are two kinds of motors; the commutator types which are widely used in direct current work and employ a commutator, and the induction types in which current is delivered to the armature by electromagnetic induction. Only the latter are applicable in hermetic refrigerators, because of sparking, carbonization, and their bad effects on gas and oil which occur in the commutator motors.

In the alternating current refrigeration motors, current is induced in the armature winding by electrical induction, and this current opposes the field current by opposing electromagnetic forces and causes rotation. Two field windings are employed, one for starting with a dissimilar phase current, and another for running.

Three different methods are employed to change the phase relation for the starting winding: resistance, capacitance, and a two-phase current, he explained. Under all three arrangements the fan motor takes two-phase current from the circuit.

In the ensuing discussion of current consumptions, Mr. Kalischer pointed out that starting currents of machines with the flooded systems are often higher because of higher suction pressures (about zero instead of the 6-in. vacuum on the dry system). It was recommended that service men use recording watt-hour meters to get a fair test of current consumption, and that the instrument be left on the line for at least two weeks.

Lewis T. Robinson, G. E. Engineer, Dies at 63

SCHENECTADY, N. Y.—Lewis T. Robinson, engineer in charge of the general engineering laboratory of the General Electric Co., died suddenly from a heart attack at his home in Schenectady, Nov. 3. He was 63 years old, and had been in generally good health.

Dr. Robinson was a veteran electrical technician, one of the widest known electrical engineers in the profession, and for 12 years the head of one of the principal laboratories of General Electric.

In his boyhood he had been office boy for Prof. Elihu Thomson of the old Thomson-Houston Electric Co., from whom he derived the enthusiasm for technical knowledge which started him on his engineering career.

His birthplace was Springfield, Mass., where he was born Oct. 20, 1868, the son of Charles Henry and Anna Adelaide (Brown) Robinson. He was educated in the public schools of Lynn and Reading, Mass.

On Feb. 3, 1896, he took charge of the standardizing laboratory of the General Electric Co. in Schenectady. The scope of the standardizing laboratory under his direction continually broadened to such an extent that in 1919 it was consolidated with the consulting engineering laboratory, which the late Charles P. Steinmetz had been instrumental in forming. The consolidated laboratory was given the title of General Engineering laboratory, and Mr. Robinson was made engineer-in-charge.

Dr. Robinson's principal hobby was music. He was adept at playing the French horn. Among Schenectady musical circles as well as elsewhere he was recognized by the most talented musicians as possessing ability.

R. L. GRAY NAMED PRESIDENT OF ARMCO SUBSIDIARY

KANSAS CITY, Mo.—R. L. Gray, vice president and general manager of the Sheffield Steel Corp. since its organization in 1925, was elected president on Nov. 3. He replaces W. L. Allen, who became chairman of the board.

Mr. Gray took part in the financial negotiations incident to the formation of the corporation and its refinancing in connection with construction, as well as the merger negotiations in which Sheffield became associated with the American Rolling Mill Co.

He was vice president of the Kansas City Bolt & Nut Co., Sheffield's predecessor, having come to that company in 1923. Between 1918 and 1923 he was chief engineer of the Laclede Steel Co. of St. Louis, and carried on an extensive construction program. He graduated with honors from Washington University in 1916.



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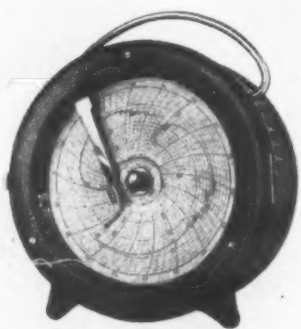
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REVIEW OF LATEST PATENTS GRANTED

ISSUED NOVEMBER 3

(Concluded from Last Issue)

1,830,060. REFRIGERATING APPARATUS. William C. Holbrook, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a Corporation of Delaware. Filed Jan. 31, 1928. Serial No. 250,809. 2 Claims. (Cl. 62-116.)

1. A refrigerator cabinet including a thick insulating wall, a lining for the wall, said wall and lining having a passageway, said passageway in the insulated wall having its end in register with the opening in the

lining and having its axis obliquely disposed with reference to the lining.

1,830,182. AIR CONDITIONING METHOD AND APPARATUS. Samuel M. Anderson, Sharon, Mass., assignor to B. F. Sturtevant Co., Boston, Mass., a Company. Filed June 21, 1930. Serial No. 462,778. 10 Claims. (Cl. 261-76.)

1. A humidifier comprising a supply of liquid means for producing an atomized mixture of said liquid through the action of a compressed air stream, and means for reducing the noise from said first mentioned means.

1,830,203. REFRIGERATION. Alvar Lennig, New York, N. Y., assignor to Electro-lux Servel Corp., New York, N. Y., a Corporation of Delaware. Filed Nov. 10, 1927. Serial No. 232,237. 9 Claims. (Cl. 62-119.5.)

1. Refrigerating apparatus comprising a horizontal shell, a flue extending horizontally through said shell, a partition within said shell forming a strong liquor chamber and a weak liquor chamber, an absorber, a vertical stand-pipe connected to the weak liquor chamber above said flue, a vertical riser pipe connected to the strong liquor chamber above said flue and connected to

grid being provided with a flange, a gear mounted for rotation on the pan, means for rotating the gear, an eccentric pin on the gear, a bar pivotally mounted on the pin, means for guiding vertically the free end of the bar for engagement with the flange, vertical movement of the bar causing elevation of the flange and the contiguous end of the grid section.

1,830,305. COOLING UNIT. Charles C. Walsh and Amy M. Walsh, Grosse Pointe Park, Mich.; said Amy M. Walsh, assignor to said Charles C. Walsh. Filed Jan. 25, 1928. Serial No. 249,302. 1 Claim. (Cl. 62-89.)

In a domestic refrigerating unit consisting of a casing divided into a plurality of compartments, a storage compartment for food, a separate storage compartment for clothing extending substantially the length of the casing, refrigerating means in one of said compartments and a conduit opening into the clothing storage compartment and projecting into the food storage compartment for effecting a heat conducting and circulation relation, and an air-tight seal between the food and clothing storage compartments.

1,830,314. REFRIGERATING SYSTEM. Jay G. De Remer, Greenwich, Conn., assignor, by mesne assignments, to J. G. Deremer Research Corp., Jersey City, N. J., a Corporation of New Jersey. Filed July 30, 1926. Serial No. 125,848. 3 Claims. (Cl. 62-126.)

2. The combination in a refrigerating system of a condenser and an evaporator, a valve chamber, an inlet thereto from the condenser and an outlet to the evaporator, a float-operated valve in said chamber controlling the outlet, and a vapor return line from the evaporator to the compressor, said chamber elongated in the direction of valve movement and said return line coiled around said chamber throughout a substantial portion of the length of the same in heat-exchanging relation therewith.

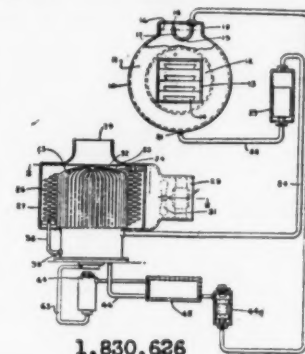
1,830,547. DISPLAY CASE. Clement V. Hill, Trenton, N. J., assignor to C. V. Hill & Co., Inc., Trenton, N. J., a Corporation of New Jersey. Filed Feb. 19, 1930. Serial No. 429,688. 3 Claims. (Cl. 240-6.)

1. Illuminating means for a showcase having a narrow top frame bar and a transparent panel at one side thereof, comprising a shield overhanging said bar and forming an air space or channel therebetween, said shield having a downturned flange at its forward edge secured to the forward edge of the bar and having its rear edge projecting beyond the rear edge of the bar and turned downwardly to form a hood overhanging the panel and a light chamber formed thereby between the hood and bar, the intermediate portion of the shield being substantially flat and of greater width than the bar to provide a top service shelf, and illuminating means in said chamber for furnishing rays of light and reflecting the same into the case through the panel.

1,830,626. REFRIGERATOR. Matson C.

SPECIALIZING
in
REFRIGERATION CASTINGS
made of
ELECTRIC FURNACE IRON
or
SEMI-STEEL GREY
IRON ALLOYS
The Superior Foundry Co.
Cleveland, O.
Metallurgical Advice Gratis

Terry, Philadelphia, Pa., assignor to Westinghouse Electric & Mfg. Co., a Corporation of Pennsylvania. Filed Nov. 19, 1925. Serial No. 70,117. 14 Claims. (Cl. 62-116.)



1,830,626

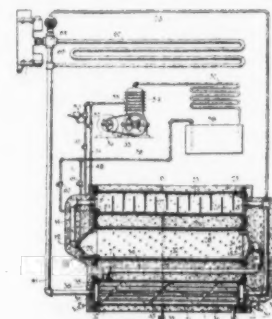
1. In a refrigerating apparatus, the combination of an evaporator, a compressor, a motor for driving the compressor, a fluid-tight casing enclosing the motor and the compressor and forming a condensing chamber, a second condenser encircling the chamber, and means for passing air circumferentially about both the condensing chamber and the condenser.

1,830,632. FREEZING THERMOSTAT. Sigurd Mattias Backstrom, Stockholm, Sweden, assignor to Platen-Munters Refrigerating System Aktiebolag, Stockholm, Sweden, a Corporation of Sweden. Filed Feb. 23, 1929. Serial No. 341,963, and in Sweden July 20, 1928. 4 Claims. (Cl. 297-3.)

3. A freezing thermostat comprising a hollow member containing a substance changeable between liquid and solid states in the range of temperature operation of the thermostat, the wall of said member being made of metal of high tensile strength and of so great thickness as to withstand, without permanent deformation, the maximum pressure obtainable on the cooling down of said substance to a temperature at which freezing thereof takes place without a simultaneous increase in volume.

ISSUED NOVEMBER 10

1,830,823. AIR CONDITIONING. Samuel C. Bloom, Chicago, Ill., assignor to The New York Air Brake Co., a Corporation of New Jersey. Filed Aug. 11, 1930. Serial No. 474,534. 7 Claims. (Cl. 62-134.)



1,830,823

1. The combination of a compressor; a refrigerative conditioner for condensing vapors from gas compressed by said compressor; a refrigerating machine connected to said refrigerative conditioner to furnish the refrigeration required thereby; an atmospheric cooler; valve means for delivering

(Concluded on Page 7, Column 1)

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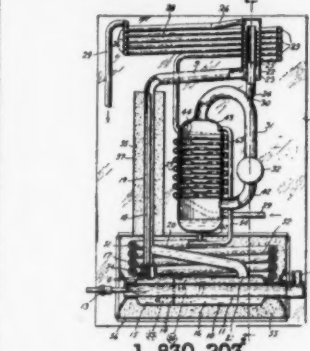
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Detroit, Michigan



1,830,203

the stand-pipe to discharge thereinto, a connection between the weak liquor chamber and the upper part of the absorber, and a connection between the lower part of the absorber and the strong liquor chamber the aforesaid connections being such as to maintain said flue covered by liquid.

1,830,260. REFRIGERATING PAN. Michael K. Buchanan and Albert Graham Horton, Norfolk, Va. Filed Sept. 25, 1930. Serial No. 484,408. 7 Claims. (Cl. 62-108.5.)

1. A refrigerating pan comprising a pan, a removable grid section disposed longitudinally of the pan, means for elevating one end of the grid, the opposite end of the

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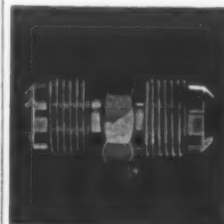
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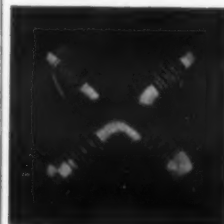
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IN FIELD OF ELECTRIC REFRIGERATION

(Concluded from Page 6, Column 5)

ing gas from said compressor to said condenser, either directly or through said cooler in varying proportions; and a thermostat subject to the temperature in a portion of said condenser and connected to actuate said valve means.

1,830,863. REFRIGERATION OIL SEPARATION. George W. Watts, Whiting, Ind., assignor to Standard Oil Co. (Indiana), Chicago, Ill., a Corporation of Indiana. Filed Sept. 25, 1930. Serial No. 484,322. 4 Claims. (Cl. 62-119.)

1. In a refrigeration system an absorber, an expansion coil, an entrainment arrester between said absorber and said expansion coil, means for passing refrigerant gases from said expansion coil through said arrester and into said absorber, means for passing liquor from said absorber to said entrainment arrester, and means for contacting said liquor with said gases thereat.

1,830,894. REFRIGERATION. Hugo Malcolm Ullstrand, Evansville, and Walter Raleigh Campbell, Newburg, Ind., assignors, by mesne assignments to Electrolux Servel Corp., New York, N. Y., a Corporation of Delaware. Filed March 5, 1929. Serial No. 344,261. 13 Claims. (Cl. 62-119.5.)

1. The method of filling a refrigerating unit designed to contain liquid and gas which comprises introducing liquid into the unit, turning the unit to spread the liquid over the inner surface of the unit and introducing gas into the unit.

7. Apparatus for filling a refrigerator unit comprising a base, rotatable shaft mounted on said base, a clamp member on said rotatable shaft, means for holding said shaft in different positions and flexible means for supplying gas and liquid.

1,831,057. ICE SCORING MACHINE. Richard S. Cowan, Fort Worth, Tex., assignor to General Ice Scoring Machine Co., Fort Worth, Tex., a Corporation of Delaware. Filed June 22, 1928. Serial No. 287,435. 8 Claims. (Cl. 125-12.)

1,831,256. REFRIGERATING APPARATUS. Frank J. Natwick and Otto G. Tinkey, Pittsburgh, Pa. Filed Feb. 11, 1928. Serial No. 253,684. 1 Claim. (Cl. 62-115.)

A refrigerating system comprising a compressor, condenser, heat exchanger, receiver, and an exposed evaporator adapted to be normally frosted its entire length connected in series in the order named, the discharge end of the evaporator being connected through the heat exchanger to the compressor, the condenser, evaporator and heat exchanger being so proportioned that unevaporated refrigerant from the evaporator will act to supplement the condenser and will be prevented from reaching the compressor.

1,831,299. REFRIGERATOR LATCH. Carl Geske, Grand Rapids, Mich., assignor to Winters & Crampton Mfg. Co., Grandville, Mich., a Corporation of Michigan. Filed July 14, 1930. Serial No. 467,798. 4 Claims. (Cl. 292-226.)

1. In a latch structure, a housing, a latch bolt pivotally mounted between its ends within said housing and having a free end projecting beyond a side of the housing, spring means acting on the latch bolt for releasably holding it in either of two extreme positions to which it may be swung, an operating handle pivotally mounted at a side of the housing, and means extending from said handle through the side of the housing and engaging with the inner end of said lever, for swinging the lever.

1,831,468. REFRIGERATING APPARATUS. John C. Scovel, Jr., Chicago, Ill., assignor to The Creamery Package Mfg. Co., Chicago, Ill., a Corporation of Illinois. Filed Nov. 11, 1927. Serial No. 232,508. 7 Claims. (Cl. 62-8.)

1. A unitary control comprising, in combination, a cylinder having heads closing the opposite ends thereof, a manually controlled expansion valve and an automatically actuated regulating valve mounted on the lower head of said cylinder and arranged to control the inlet of liquid refrigerant thereto, a float device within the lower end of said cylinder arranged to actuate said automatic valve, a manually controlled exhaust valve and an automatically regulating suction pressure valve mounted on the upper head of said cylinder, an exhaust pipe from a freezer extending through one side wall of said cylinder and having its inner end adjacent the opposite side wall, and a baffle plate disposed within said cylinder above said float.

1,831,758. COUNTER SHOWCASE REFRIGERATOR. Virgil P. Warren, Atlanta, Ga. Filed Dec. 26, 1928. Serial No. 328,466. 1 Claim. (Cl. 62-37.2.)

A counter refrigerator showcase having a transparent front display section and a rear refrigerator compartment provided with a vertical opening, a door hinged about a normally horizontal axis to move into and out of said opening, means for holding the door substantially horizontal when open, a refrigerant tank having guide plates secured to opposite ends thereof, guide channels mounted in said compartment to receive said guide plates slidably, and means on the bottom of said tank to contact with the inner face of said door when the latter is in open position and the tank is slid out of said compartment over said open door.

1,831,897. REFRIGERATOR WALL STRUCTURE. James S. Wagner, Charleroi, Pa., assignor of one-fifth to George W. King, Fairhope, Pa., one-fifth to McClelland Hixenbaugh, one-fifth to Harry P. Ray, and one-fifth to Charles S. Batehan, Charleroi, Pa. Filed Jan. 27, 1930. Serial No. 432,659. 2 Claims. (Cl. 72-16.)

1. A heat-insulating wall structure including a plurality of blocks of insulating material set edge to edge, a plurality of lengths of angle iron, one flange of each angle iron overlying the face of one of said blocks and the other flange of the angle extending between the meeting edges of adjacent blocks, such flange being less in width than such meeting faces of the blocks, in consequence of which, throughout a portion of their extent, the blocks meet edge to edge with no interposed web of metal between, and a uniting bolt extending through the bodies of adjacent blocks and through the flanges of the angle irons assembled therewith.

1,831,917. REFRIGERATING APPARATUS. Jesse G. King, Dayton, Ohio, assignor, by mesne assignments, to Frigidaire Corp., a Corporation of Delaware. Filed May 31, 1927. Serial No. 195,184. 13 Claims. (Cl. 62-116.)

1. Refrigerating apparatus comprising a compressor, a condensing conduit of relatively small cross section, and a long conduit of relatively large cross section connecting the outlet of the compressor and inlet of the condenser, the end of said conduit nearest the condenser having a downward gradient.

1,831,971. HEAT EXCHANGE APPARATUS. Charles O. Sandstrom, Los Angeles, Calif. Filed Nov. 8, 1930. Serial No. 494,309. 7 Claims. (Cl. 287-247.)

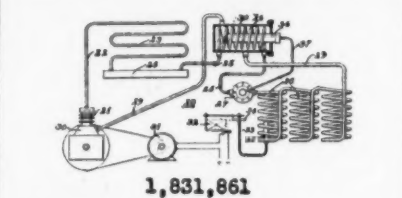
1. A heat exchanger comprising tube sheets, tubes extending between said tube sheets, caps at the ends of said tubes, a shell enclosing said tubes, and a plurality of U-shaped baffle members within said shell for housing said tubes for providing fluid passages around said tubes.

1,832,070. AUTOMATIC FLUID FLOW CONTROL. Walker J. Weesner, Indianapolis, Ind. Filed May 3, 1929. Serial No. 360,155. 5 Claims. (Cl. 299-8.)

1. A drinking water supply system including a water cooler, a drinking fountain, a pipe line supplying cooled water from said cooler to said fountain, a tank associated with said fountain, a second pipe line connecting said first pipe line to said tank, a valve for controlling the flow of water through said second-mentioned pipe line, means for draining water from said tank at a measured rate, and float-operated mechanism controlling said valve to admit water to said tank when the water level therein has dropped to a predetermined level and to stop the admission of water thereto when the water level in said tank has been raised to a second predetermined level.

1,832,089. REFRIGERATING APPARATUS. (Continued on Page 8, Column 2)

1,831,861. REFRIGERANT OVERFLOW TRAP. Virgil P. Warren, Atlanta, Ga. Filed Dec. 26, 1928. Serial No. 328,466. 1 Claim. (Cl. 62-37.2.)



refrigerant overflow trap in said return line, said feed line being in thermal contact with said trap, and a member in said trap modifying the action of said expansion valve.

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1,832,089. REFRIGERATING APPARATUS. (Continued on Page 8, Column 2)

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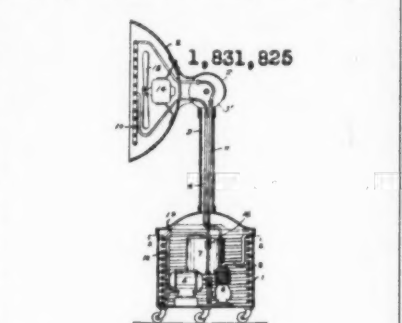
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1,831,825. COOLING DEVICE. Harry H. Schutz, Houston, Tex. Filed July 10, 1926. Serial No. 121,666. 1 Claim. (Cl. 62-129.)



A combination with a housing, of a support, a concave-convex deflector having an adjustable universal connection with the upper end of said support and provided with an opening, a compressor in the housing, an electric motor having a driving connection with the compressor, a refrigerant tank within the housing, a liquid supply pipe leading from said tank to a helical evaporator coil in said deflector, a gas suction pipe leading from the evaporator to the compressor.

1,831,845. MERCURY SWITCH. Paul K. Cramblet, Milwaukee, Wis., assignor, by mesne assignments, to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a Corporation of Delaware. Filed Dec. 7, 1928. Serial No. 324,494. 7 Claims. (Cl. 200-152.)

1. In combination, a mercury switch having electrodes, flexible leads connected to the electrodes of the switch, and a covering of elastic rubber completely surrounding the switch, the electrodes and the leads to protect and hermetically seal the same, said covering having integral mounting lugs.

1,831,861. REFRIGERATING APPARATUS. Charles F. Henney, Dayton, Ohio, assignor to Frigidaire Corp., Dayton, Ohio, a Corporation of Delaware. Filed April 30, 1928. Serial No. 273,959. 1 Claim. (Cl. 62-3.)

A refrigerating apparatus comprising a re-

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If you are using flared joints on your refrigeration lines you are doing this very thing.

In such a joint the clearance between the base of the nut and the outside diameter of the tube gives no support to the unflared portion of the tube inside the joint.

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STREAMLINE Coupling
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Patent 1,770,852. Patent 1,776,502.
Other patents pending.



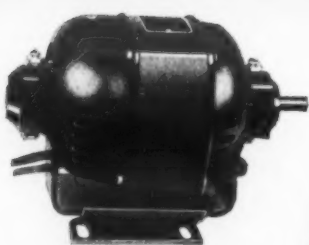
STREAMLINE Tee
Copper to Copper to Copper
Patent 1,770,852. Patent 1,776,502.
Other patents pending.



STREAMLINE Cross
Copper to Copper to Copper
Patent 1,770,852. Patent 1,776,502.
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